REPORT RESUMES

ED 012 263 SP 001 134

THE EXTENDED SUMMER PROGRAM, A TWO YEAR SUMMARY.

BY- CATON, JAY AND OTHERS
JEFFERSON COUNTY PUBLIC SCHOOLS, LAKEWOOD, COLO.

PUB DATE NOV 66
EDRS PRICE MF-$0.18 HC-$4.48 112P.

DESCRIPTORS- ELEMENTARY SCHOOL STUDENTS, EVALUATION, HIGH SCHOOL STUDENTS, *INSERVICE TEACHER EDUCATION, JUNIOR HIGH SCHOOL STUDENTS, MICROTEACHING, *NONGRADED CLASSES, QUESTIONNAIRES, STUDENT ATTITUDES, *SUMMER PROGRAMS, TABLES (DATA), TEACHER ATTITUDES, *TEACHER IMPROVEMENT, JEFFERSON COUNTY, DENVER, LAKEWOOD

TO PROVIDE TEACHERS WITH TRAINING IN TEAM TEACHING, NONGRADING, AND EFFECTIVE STAFF UTILIZATION AS A MEANS OF IMPROVING PUPIL INSTRUCTION, THE EXTENDED SUMMER PROGRAM WAS CONDUCTED IN 1965 AND 1966. THE PROGRAM WAS STRUCTURED SO THAT (1) TEACHERS WERE RECRUITED FOR SPECIFIC ROLES IN A FULL-DAY PROGRAM, (2) EACH TEACHER UNDERWENT ORIENTATION EXPERIENCE, (3) TEACHERS WERE DIVIDED INTO TEAMS OF 12 WHO WERE FULLY RESPONSIBLE FOR 100 CHILDREN, (4) EACH TEAM WAS DIVIDED INTO THREE SUBTEAMS EMPHASIZING INTERDISCIPLINARY ACTIVITY, (5) EACH SUBTEAM ROTATED THROUGH THREE PHASES--PLANNING, TEACHING, AND OBSERVATION ANALYSIS, AND (6) EACH TEACHER COULD RECEIVE GRADUATE CREDIT FROM AN AFFILIATED COLLEGE OR DISTRICT-ORGANIZED INSERVICE CREDIT. STUDENTS FROM ALL GRADES WERE RECRUITED FOR THE NONGRADED PROGRAM (DIVIDED INTO ELEMENTARY, JUNIOR HIGH, AND HIGH SCHOOL GROUPS). THEIR PROGRESS WAS JUDGED ON THE BASIS OF PERFORMANCE CRITERIA WITH EACH CHILD BEING PACED ACCORDING TO HIS OWN CAPABILITY, INTEREST, AND NEED. PROJECT EVALUATION WAS BASED ON QUESTIONNAIRES AND INTERVIEWS. FINDINGS INDICATE THAT PARTICIPATING TEACHERS EXHIBITED GROWTH IN (1) ABILITY TO TEACH FOR PROCESS GOALS, (2) ABILITY TO EVALUATE PUPIL GROWTH IN RELATION TO PROCESS GOALS, (3) UNDERSTANDING THE ADVANTAGES AND DISADVANTAGES OF TEAM TEACHING, AND (4) THE USE OF PERFORMANCE CRITERIA IN DEVELOPING EDUCATIONAL OBJECTIVES. (AW)

01134

ED012263

JUN 13 1967

Z7
c.1

46pp.

THE 'EXTENDED SUMMER PROGRAM'

A Two-Year Summary

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

SP001134

JEFFERSON COUNTY PUBLIC SCHOOLS, Colorado
1580 YARROW STREET / DENVER, COLORADO 80215

NOVEMBER, 1966

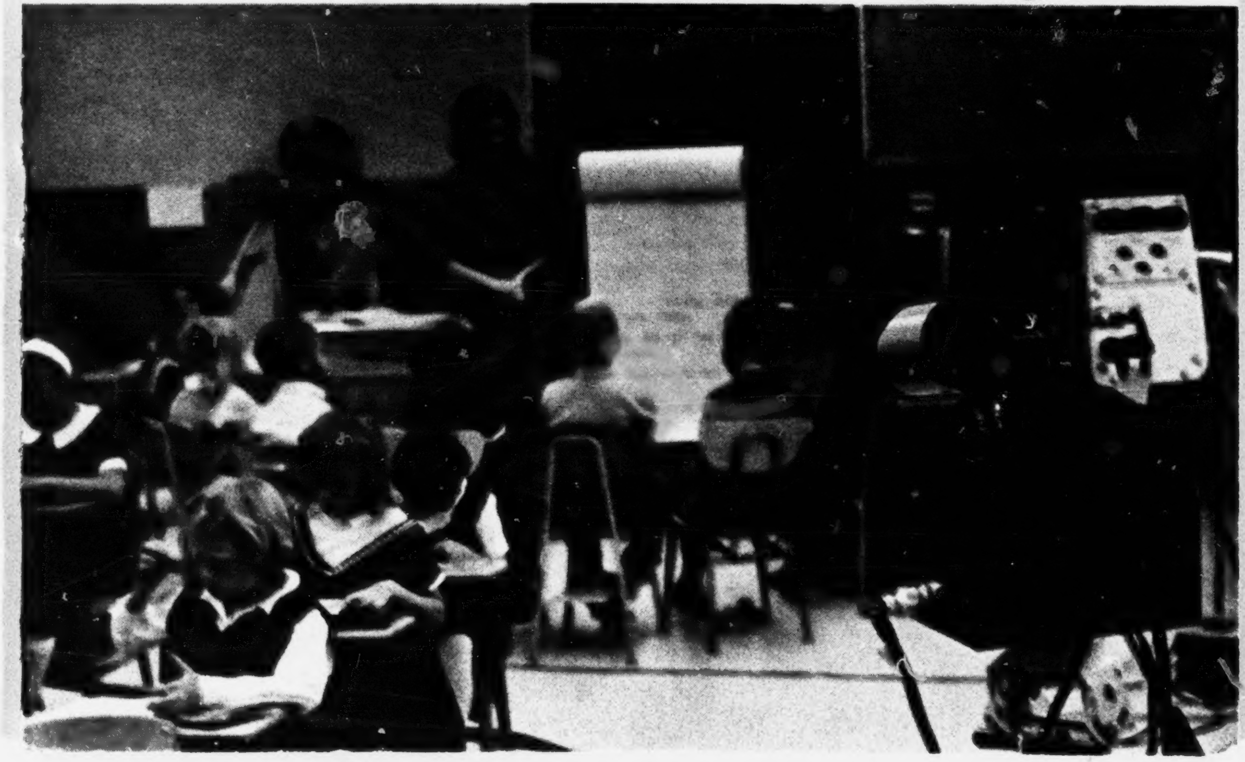
01134

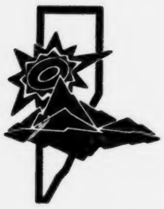
JUN 13 1967

Z7
c.1
16pp

"NEW DIMENSIONS IN LEARNING"

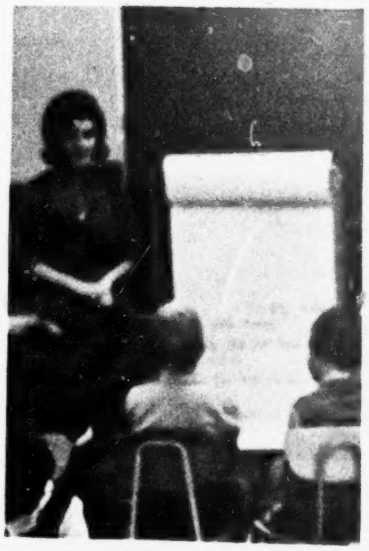
☐the extended summer program





NEW
DIMENSIONS
IN
LEARNING

□the extended summer program



INTRODUCTION

The Jefferson County School District has a deep commitment to instructional improvement as a continuous goal of education. It has sought to explore the efforts of educators, academicians, and technologists as they have developed new dimensions in learning.

New approaches to teacher education, new designs for staff utilization, new patterns of organizational structure, new curricula, new programs of research and development, new instructional devices, and new strategies for control of variables in the instructional process have made contributions to increasing effectiveness and efficiency.

The District feels the need to provide the opportunity for teachers to work with pupils of differing maturity levels, abilities, and interests in an exploration-conscious program of teaching and learning. This need is basic to the organization and support of the Extended Summer School Program where an intellectually-responsible, service-oriented program of teacher-pupil experience sharing can be provided.

The Extended Summer School Program differs both in intent and structure from the usual summer school program. It provides a new, and extended, opportunity for pupils to engage in significant learning activities within the framework of a teacher training program.

PURPOSES OF THE EXTENDED SUMMER PROGRAM

The program is designed to help the district through improving instructional and learning processes.

It helps the district by:

1. providing an environment in which new dimensions of teaching-learning can be explored;
2. allowing for the development of competencies based on new thought and research in the field of education; and
3. arranging through a carefully planned program of in-service experience an opportunity for the dissemination of innovative practice through the district.

It helps the teachers by:

1. increasing their sensitivity to the instructional role in a dynamic society;
2. providing the opportunity to explore promising new organizational designs and new patterns of staff utilization;
3. offering opportunities at coordinated and cooperative efforts at instructional improvement; and
4. stimulating them to become adept, using those practices and procedures necessary for personalizing instruction.

It helps pupils by:

1. extending to them the opportunity to improve their learning competencies through providing process training;
2. stimulating them to explore their role as a participant in their own education;
3. helping them to establish realistic goals and providing the opportunity for moving toward those goals in a manner suited to their abilities, interests, and needs; and
4. allowing them the opportunity to extend their efforts beyond the challenges usually afforded, and permitting them to develop understandings and appreciations through in-depth experience.

ORGANIZATION OF THE PROGRAM

The program is organized to accomplish the identified purposes of the district. This means essentially that:

1. pupils are recruited from all grade levels for a half-day program of instruction;
2. pupils are organized into groups of approximately 100 with each group being assocated with its own staff of teachers;
3. while the program is non-graded, the pupils are divided into three levels (elementary, junior high, and high school) with a distinct program being offered on each level;
4. the curriculum experiences for the pupils are carefully structured to insure the accomplishment of specific goals; and
5. pupil progress is judged on the basis of performance criteria with each child being paced according to his capability, interest, and need.

It further means that the program will be organized as a training experience for teachers. To accomplish this purpose:

1. teacher-students are recruited, selected, and assigned to specific roles for a full day program;
2. teacher-students are divided into teams of 12 (each such team to be associated with one of the groups of 100 pupils), and each such team has full responsibility for the experiences afforded the children assigned them;
3. each team is structured into three sub-teams with emphasis on inter-disciplinary team activity;
4. each sub-team will rotate through a three phase cycle of planning, teaching, and observation-analysis with each cycle being repeated once during the program;
5. each participant will undergo preparatory and orientation experiences as a prerequisite for participation in the six-week teacher-pupil school experience;
6. credit of two kinds are available to participants: graduate credit from an affiliated college applicable on a Master of Arts degree program, or district-recognized, inservice credit.

The experience given participants is under the supervision of the Division of Instruction. Supporting services to the staff are provided by the Deputy Superintendent for Instruction, the Level Directors, the Director of Curriculum, and the Coordinators for Elementary and Secondary School Curriculum.

The programs are directed by two Coordinators of the Extended Summer School Program. Each Coordinator is assisted by an Assistant Coordinator. Staff includes a Team Leader and an Observation Team Leader for each team of 12 teacher-students. The program is further supported by Resource Specialists, a Materials Resource Specialist, and lay personnel. The role of each of these training and supporting staff members is examined in depth in another portion of this brochure.

SEMINAR
AND
PRACTICUM
OBJECTIVES

The Jefferson County Summer Program is a plan to offer experienced school personnel, through team organizational pattern, an opportunity for supervised inquiry and experience in the fields of instruction, supervision and analysis. The R-1 program, therefore, should be helpful to teachers, resource specialists and administrators. There will, of course, be areas that may interest students in schools of education, particularly those with some experience in school practice, for whom observation may provide an opportunity to synthesize theory and sound practice.

The R-1 Summer Program has been organized to promote professional maturity and to increase leadership potential by engaging teachers in inquiries into the following theories and practices:

1. Curriculum Structure—with emphasis on the adaption of structure to serve the needs and interests of students with varying abilities.
2. Performance Criteria—with exploration of criteria related to the pacing of student activity and the determination of student progress.
3. Subject Matter Articulation—with attention to those aspects of subject matter common to all disciplines—the identification of common processes which unify experiences afforded by exposure to various disciplines.
4. Process Curricula—with exploration of the provisions in such curricula for encouraging the development of inquiry or problem solving, tool skills, and those categories of process that are related to the involvement of the child as a participant in his own education (included in this category are self-initiation, self-evaluation, self-involvement, critical attitude, and use of situation).
5. Instructional Analysis—with provision for professional service based on scientific observation and data gathering, the analysis of the effectiveness of instructional strategy in light of stated objectives, and an assessment of plans for lesson evaluation.

6. Group Dynamics and the Developing Role of Team Leadership—with focus on sensitivities related to roles, goals, and obstacles as they affect team activity directed toward goal achievement.
7. Control and Use of Variables in the Instructional Process—with exploration of the uses of time, space, materials, equipment, staff, effort, and money to individualize instruction.
8. Learning Theory—with emphasis on the consistency between learning theory, educational philosophy and pedagogical practice.

The Summer Program will offer opportunity for these several inquiries in the context of a fully functioning school.

ROLE DEFINITIONS

Pupils: Participants who will be attending the summer session, receiving instruction during the morning hours.

Teacher-Students: Experienced teachers who seek credit either as graduate students in cooperating institutions or in the district's in-service training program who will participate on teaching, analysis, and planning teams.

Staff: Supervisory personnel, including team leaders, subject-resource specialists and administrators.

Consulting Staff: Persons with recognized special competencies who are invited to participate in the program.

Even though the Jefferson County R-1 extended summer program will utilize experienced and highly competent professional educators, the uniqueness of the training role suggests the advisability of identifying the tasks of each category of staff membership.

It will be the responsibility of the **staff** to participate in **pre-session** activities related to:

1. the recruitment and placement of participating personnel,
2. the identification of curriculum and necessary supporting materials;
3. the structuring of training experiences; and
4. the provision for leadership in activities considered prerequisite to the program.

During the course of the summer program the staff shall have the responsibility of:

1. insuring a meaningful experience for children;
2. supervising the training of the teacher-students in the identified areas of exploration;
3. coordinating the requirements and objectives of both the cooperating college and the district;
4. establishing the evaluative criteria for assessing the effectiveness of the program; and

5. structuring the weekly program and making provisions for a practicum application of the seminar session ideas.

Staff personnel as individuals have differentiated tasks. The identified tasks are designed to be descriptive rather than definitive. In reality, role definition is an attempt to suggest responsibilities which are peculiar to a given position, and to offer guidelines from which staff members may advance to accomplish individual and collective tasks.

PROGRAM COORDINATOR —

The Program Coordinator, as his title implies, will coordinate the efforts of participating personnel in the use of all available resources in the accomplishment of the district's objectives in exploring new dimensions in learning.

He serves as a liaison between the program and the district's divisions of instruction, business, personnel, and administration.

This service requires supervision of the staff in the discharge of the following responsibilities to:

Instructional Services

1. to identify the focus for the program;
2. to structure the sequence of training experiences offered to the teacher-students;
3. to give specific direction to the activities of Team Leaders, Observation Team Leaders, Resource Specialists and other staff personnel;
4. to identify the roles and coordinate the activities of the staff;
5. to coordinate the district's interests with those of participating colleges in matters related to the training given to the teacher-students;
6. to assist in the identification and direction of consulting staff members as they provide service to staff personnel;
7. to assist in the identification of instructional resources—equipment, materials and supplies; and
8. to orient, inform and assist visitors so they might understand the program.

Personnel Services

1. to participate in the identification, selection, and assignment of personnel associated with the program;
2. to assist in the enrollment of certified personnel in the credit program; and

3. to assist in the establishment of criteria for the evaluation of teacher-student performance and certification of participants for credit.

Administration Services

1. to assist in the establishment of the criteria and the program for research and evaluation; and
2. to cooperate in the dissemination of information concerning the program and its operation.

Business Services

1. to develop a budget in support of the program; and
2. to administer the budget.

ASSISTANT COORDINATOR —

The Assistant Coordinator will be responsible to the Coordinator for the administration of the building and for providing assistance in the direction of the program. His primary concern will be to insure meaningful experiences for pupils within the framework of the teacher training objectives of the teacher training objectives of the program.

These responsibilities will be discharged through performing the following functions:

1. to conduct a program of pupil recruitment, selection, and assignment suitable to the needs of the program;
2. to assemble pupil records from, and to return them to, contributing schools with arrangement for proper entries to reflect program participation;
3. to devise and administer programs of pupil accounting and progress reporting;
4. to coordinate the necessary activities associated with providing services to pupils including transportation, guidance, health, etc.;
5. to give direction to the total program offered to pupils to insure that it provides meaningful experiences for them;
6. to assist in the recruitment, selection, and placement of staff and training personnel;
7. to assist in the direction of the teacher training program through providing service and guidance to Team Leaders, Observation Team Leaders, Resource Specialists, Instructional Materials Specialists, and members of the Consulting Staff;

8. to supervise clerical and lay help and to assist in the establishment of their roles in the program;
9. to assist in identifying and in procuring the instructional resources required for the program;
10. to work with the Disseminator of Information in developing information about the program, and to assist in the interpretation of the program to visitors;
11. to provide assistance to the Department of Research as it assesses the program;
12. to administer the building and to devise plans for space utilization, custodial, food, and other services;
13. to provide for the preservation and storage of reusable materials at the conclusion of the program;
14. to assist in the evaluation of participants who are engaged in the program for credit; and
15. to provide other services that may be required as the program progresses.

The Assistant Coordinator is in a position of line authority and his authority is commensurate to the need required by his responsibility.

TEAM LEADER —

The Team Leader assumes for his team the same type of supervisory responsibility normally associated with the principalship. The Team Leader is assisted in this responsibility by the Observation Team Leader who provides specialized training in the observation and analysis of instruction.

The Team Leader will provide for coordinating the efforts of his sub-teams and for communication between them.

He shall further assist each of the sub-teams in the following manners:

Planning sub-team—

1. the identification of content and process objectives;
2. the development of a teaching strategy designed to achieve the identified goals;
3. the establishment of criteria through which an assessment of lesson effectiveness can be determined; and
4. the provision for sufficient copies of the planning sub-team's written teaching plans to serve the needs of other sub-teams.

Teaching sub-team—

1. the provision for supportive services to the teaching team; and
2. the establishment of sufficient supervisory service to insure that teaching activities are educationally justifiable.

Observation sub-team—

1. delegate responsibility to the Observation Team Leader in the freedom to direct the observation and analysis of instruction; and
2. the provision of the opportunity for the observation sub-team to communicate their analysis to the observed member of the teaching team.

OBSERVATION TEAM LEADER —

The Observation Team Leader will have direct charge of the sub-team that is observing and analyzing the performance of the teaching team. This person has the highly specialized task of teaching and directing experienced personnel, on the graduate level of study, how to observe and analyze teaching, and how to communicate the analysis in a manner that may improve the teacher-student's perceptions relative to what constitutes effectiveness in their teaching performance.

The Observation Team Leader shall work with the total team in a manner to be prescribed by the Team Leader. He shall make his special competency in analysis of instruction available to the total team when the team is engaged in coordinated planning.

His service to each sub-team can be identified as follows:

Planning sub-team—

1. to provide at the request of the team leader, or the planning sub-team, information necessary for the continuity of learning experiences for pupils.

Teaching sub-team—

1. to provide, with the assistance of the observation team, a professional service for the teaching team designed to increase the effectiveness of instruction; and
2. to effect, under the direction of the Team Leader, changes in the day-to-day planning of the teaching team in these ways:
    a. through the critique conference with the teacher-student whose teaching was observed and analyzed; and

   b. through desirable feed-back which can be made (directly or indirectly) to the total team.

Observation sub-team—

1. to supervise the activities of the observation sub-team as they engage in:
   a. analyzing lesson plans with attention to objectives, strategy and evaluative procedures;
   b. developing an observational plan;
   c. observing and analyzing classroom instruction;
   d. conducting critique sessions with teacher-students who have been observed; and
   e. providing for follow up observation and analysis.
2. to assist the observation team members in the development of sensitivities related to instructional effectiveness; and
3. to assist the observation team members in relating the effective practices they have observed to their own teaching style.

RESOURCE SPECIALIST —

The Resource Specialist will bring his special competencies to bear on the program devised for pupils. He must follow the thesis that if teacher-students are to teach curriculum through problem solving techniques, the curriculum must be organized as one of inquiry.

The Resource Specialist shall have the responsibility to the program:

1. to provide such services as shall be requested by the program coordinators. This service will be related to the choice and structure of curriculum;
2. to provide assistance in the procurement of materials and equipment necessary to support the curriculum; and
3. to provide a consultative service in the implementation of the curriculum.

INSTRUCTIONAL MATERIALS SPECIALIST —

The Instructional Materials Specialist will be responsible for the operation of the Instructional Materials Center. The Center is a place where ideas, in tangible form, are housed, used and distributed to the classrooms. The IMC contains books, magazines, films, filmstrips, audio-visual equipment, maps, pictures, pamphlets, tapes, recordings, tiles (field trip and resource visitors), and other physical equipment from which a child may learn.

The Instructional Materials Specialist shall have the responsibility:

1. to provide professional assistance to the staff in the identification and procurement of instructional materials to support both teacher-student and pupil needs;
2. to establish procedures related to the operation of the center;
3. to provide assistance to pupils in the location of materials in support of their inquiries;
4. to associate himself with the planning and teaching teams to insure that needed equipment and materials are made available; and
5. to maintain a professional library pertinent to the summer program.

TEACHERS OF SPECIAL SUBJECTS —

The Teachers of Special Subjects as a group of individuals representing art, music and physical education shall collectively constitute an instructional team. Individually their training experience will encompass all phases of the Planning-Teaching-Observation/Analysis cycle.

It shall be their responsibility:

1. to participate with a teaching team in providing additional specialized experiences for pupils;
2. to participate with a planning team in identifying the experiences, and coordinating activities, provided through their speciality; and
3. to participate with the observation team in the observation and analysis of instruction.

The Extended Summer Program

A Two-Year Summary

Prepared by the Staffs of the
1965 and 1966 Programs

Superintendent of Schools
W. Del Walker

Board of Education
Charles Meyer
Charles Moore
James Richey
Hal Shelton
Wayne Van Arsdale

TABLE OF CONTENTS

INTRODUCTION.. v

STATEMENT OF PROBLEM.. 1

METHOD OF PROCEDURE... 1

STATEMENT OF PURPOSE OF SUMMER SCHOOL......................... 2

ROLE DEFINITIONS.. 4

- Pupils... 4
- Program Coordinator.............................. 5
- College Consultant............................... 5
- Principal.. 6
- Team Leader...................................... 7
- Assistant Team Leader............................ 7
- Observation Team Leader.......................... 8
- Materials Specialists............................ 8
- Team Teaching Assistants......................... 9
- Tutors... 9
- Secretary.. 10
- Consulting Staff................................. 10

PROGRAM ORGANIZATION FOR STUDENTS.............................. 11

- Seminar.. 11
- Practicum.. 12
  - Planning-Teaching-Oberservation Cycle........ 12
  - Video Tape................................... 15

INSTRUCTIONAL ORGANIZATION FOR PUPILS.......................... 16

- Team Teaching.................................... 16
  - 1965 Elementary Team Teaching................ 17
  - 1966 Elementary Team Teaching................ 19
  - 1965 and 1966 Junior High Team Teaching...... 22
- Nongrading....................................... 24
  - 1965 Elementary Nongrading................... 24
  - 1966 Elementary Nongrading................... 26
  - 1965 Junior High Nongrading.................. 27
  - 1966 Junior High Nongrading.................. 28

LEARNING EXPERIENCES FOR CHILDREN.............................. 30
- Grouping... 33
  - Large Group.................................. 33
  - Small Group.................................. 34
  - Independent Study............................ 34
- Pupil Progress................................... 34
- Open Laboratory.................................. 36

Page

SUPPORTING DATA 37

TABLES

I. Frequency of Various Sized Groups Reported During a Three Day Period by Primary Teams 37

II. Frequency of Various Sized Groups Reported During a Three Day Period by Intermediate Teams 37

III. Frequency of Various Sized Groups Reported During a Three Day Period by the Junior High Team at Carmody as Compared with Last Year at Creighton 38

IV. Length of Time Reported Spent Under the Direction of One or More Teachers for a Specific Learning Task by Primary Teachers 38

V. Length of Time Reported Spent Under the Direction of One or More Teachers for a Specific Learning Task by Primary Teachers 39

VI. Length of Time Reported Spent Under the Direction of One or More Teachers for a Specific Learning Task 39

VII. Change in Teacher Behavior 41

VIII. Professional Growth of Teachers 42

IX. Elementary Student (teacher) and Pupil Attitudes 46

X. Junior High Student (teacher) and Pupil Attitudes 48

XI. Parent Attitudes 49

Recommendations 50

Page
APPENDICES 52

A. Primary Team Lesson Plan 53

B. Intermediate Team Lesson Plan 55

C. Social Studies Lesson Plan 57
(Junior High School)

D. Summer Program Goals 58

E. Log of Pupil Learning Activities 59
(Primary)

E.E. Log of Pupil Learning Activities 60
(Intermediate)

F. Teacher's Opinionnaire 61

G. Principal's Opinionnaire 62

H. Professional Growth of Teachers 63
(Student Goals Opinionnaire)

I. Professional Growth of Teachers 65
(Team Leader Opinionnaire)

J. Teacher Attitude Opinionnaire 67

K. Pupil Attitude Questionnaire 69

L. Parent Opinions 71

M. Program Recommendations 72
(Coordinators and Principals)

N. Pupil's Projects Proposals 76
(Extended High School Program)

INTRODUCTION

A transformation has affected the form and substance of American education during the past decade. It is evident in the creation and implementation of organizational innovations such as team teaching, non-grading, and flexible or modular scheduling. It is evident in curricular studies which have produced "packages", designed to draw the individual into an active learning role. University-centered projects have produced new programs in science, mathematics, and social studies. Emphasis has been focused upon providing to a greater degree for individual need and interest, for the "discovery" of concepts and relationships, for the learner's manipulation of instructional media.

It is a conviction held by some that this educational transformation has had little impact upon formal teacher training. And it is the teacher who ultimately determines whether the classroom experience will reflect the teaching-learning patterns implicit in recent organizational, theoretical, and curricular innovations. If through experience and training the teacher places content above concept, group above individual, pedagogy above inquiry, the student will remain a passive recipient rather than an active participant in learning.

In an effort to involve teachers actively in the analysis of the teaching-learning process, the Jefferson County R-1 School District initiated in the summer of 1965 the Extended Summer Program. The objectives were several:

> The R-1 Summer Program has been organized to promote professional maturity and to increase leadership potential by engaging teachers in inquiries into the following disciplines and patterns:
>
> A. The structure of curriculum in Language Arts, Social Studies, Mathematics and Science.
>
> B. The relationship of specialized subjects of Art, Vocal Music, and Physical Education.

C. The potential for better learning, and greater self-direction, with concern for competence, which may be possible in learning through problem-solving.

D. The promising possibilities of improving instruction through a thorough analysis of teaching.

E. Inquiry into the possibilities and limitations of different patterns of nongraded instruction through team groups.

F. Investigation into problems involved in leadership exposure.

G. Dissemination of pertinent organizations, methods and materials throughout the district.

H. The opportunity to adapt the curriculum, instructional procedures and processes of education to the needs of children.

The Extended Summer Program used as its model the Harvard-Lexington Summer Workshop. A number of R-1 teachers and administrators participated in these sessions over the period of several years. Each returned with an altered perspective of his role, a perspective enhanced by the climate of inquiry which pervades this school district.

With this nucleus of educational leaders the decision was made to implement the Extended Summer Program. Other decisions followed. Six-week programs would be provided at the elementary and junior high school levels. Pupil enrollment would be non-selective. Teachers, called students in this program, would be recruited from many schools and would represent a diversity in terms of age, experience and previous training. Classes for pupils would be held in the mornings with afternoons given over to student planning and evaluation. Preceded by a week of orientation, a three-phased cycle would be implemented for students (teachers), consisting of one week of planning, one week of teaching, and one week of observing classroom performance. Each student would repeat this cycle once. A local college would be asked to participate as a partner in providing college credit to students (teachers), in evaluating individual student performance, and in providing consultation to the total effort. Pupils would involve themselves in curriculum materials which would support but not repeat those utilized during the regular school year. Consultants with particular competencies in various fields of education would be invited to contribute to the retraining effort. Schools would be organized on a non-graded basis in teaching teams. Time utilization would reflect flexibility determined by pupil interest and need.

In January, 1965, the Extended Program was set in motion. Leadership was identified from among those who had participated in the Harvard-Lexington Program and from among those who indicated through their performances the desire to improve the teacher's perception of the teaching-learning process. Students (teachers) were identified to work with the nearly 600 pupils who enrolled in the program. Colorado State College agreed to provide twelve quarter hours of graduate credit to each student successfully completing the training. Consultants from Stanford University, Harvard University, Colorado College, Colorado State College, and Colorado University were identified and contracted to participate.

During orientation week of June, 1965, those involved in the Jefferson County Extended Summer Program witnessed the beginning of change. With the stimulation provided by its first consultants, Dwight Allen, Stanford University, Robert Anderson of Harvard, and John Meier of Colorado State College, a unique identity began to emerge for the R-1 program. An organizational form and initial direction was provided by the Harvard-Lexington experience. However, the infusion of new ideas; the need to accommodate unforeseen problems; the introduction of factors related to personalities, curriculum, supportive media, and facilities all combined to create an entity that emulated, but did not duplicate, the model.

The effect or the importance of enthusiasm in a given instance is difficult to measure. Its influence in affecting change was present during the summer of 1965. There were expressions of despondency in the search for tangibles. Frustration levels were frequently high. However, the general tenor among individuals and teams of individuals reflected the belief that they were involved in an original experience.

This belief had its origins in identifiable elements. The initial empasis by Dr. Allen upon the precise identification of process goals provided support to those program leaders who had the Harvard-Lexington experience. The concomitant development of teaching strategies and the statements of pupil behavioral expectations combined to give purpose to the planning - teaching - observing cycle.

The resultant need to measure the accomplishment of these program goals led to a reexamination of evaluation techniques and the critical analysis of teaching performance.

Attention shifted from strictly objective evaluation to the inclusion of subjective self-evaluation. In short, the theory of individualized instruction for pupils found its parallel in an emerging individualized instruction for students(teachers). In the same manner that pupils were guided to learning involvement and self-evaluation of progress and need, so students were immersed in the process of determining their progress and need as related to the improvement of their classroom performances.

Another element which has contributed to the distinct character of the R-1 program has been the emphasis placed upon the evaluation of pupil behavior. To consider pupil understanding of concepts apart from the student planning which identified them proved not only unrealistic but impossible. As a result, increasing attention was given to instruments of pupil evaluation. With the use of videotape facilities, it became possible to correlate planned process and content goals, the teaching performance, and pupil reaction. The critique which followed observation thus had dimensions which few students had formerly experienced. The effect heightened an individual's ability to view his performance within the context of a learning experience.

Still another unique element the Extended Program was related to the pupils' curriculum. Considered in relation to the non-graded structure, this curriculum became the malleable substance needed to accomplish identified process goals, teaching strategies, and desired behavioral changes. Through interdisciplinary planning, students could reshape curricular emphasis in order to affect learning goals and, more importantly, to tailor program to individual pupil.

In the fall of 1965 the decision was made to continue the Extended Summer Program in 1966. Several alterations were contemplated, largely as a result of recommendations emerging from the 1965 program. Assistants would be named to aid Team Leaders. A high school program would be added. The use of consultants would be minimized somewhat in order to allow more time for planning and evaluation. An emphasis would be placed upon helping to a greater degree those pupils with remedial problems - - the educationally deprived.

Coordinators would be named at the elementary and secondary levels. An attempt would be made to increase enrollment. Several teams would operate in a traditional building to determine the efficacy of program emphases in another environment. Pretraining of participating students would be considered.

Enrollment for the high school program was disappointingly small. The reasons for this are several. Publicity was less than adequate. This was due in part to the inexperience of the Director. Enrollment proceeded apace with a school bond election campaign. This campaign required the concerted effort and attention of community and school personnel.

However, despite the size of enrollment, a program of significance evolved through the efforts of the Secondary Coordinator, the Principal, Team Leaders, students, and supportive personnel. By introducing a fourth cycle, Exploration, a new dimension was provided to students. Through this activity, individuals were given time to investigate a myriad of media and ideas which could enrich the established program.

As a result, the high school program was responsible for adding still another element to the program's unique character. For not only did many students experience a new dimension of individualized involvement, but their pupils also were guided to the identification and development of individual projects (See Appendix N).

And while refinements were realized during the 1966 program, areas of concern remain. With the possible exception of Drs. Anderson, Meier, and Dr. Allen, who by now are nearly indispensable to the Extended Program, consultants have still not been utilized to the greatest advantage. Perhaps this is because preplanning has been inadequate in identifying precise consultant needs.

R-1 Subject Area Coordinators, Level Directors, and Principals have vital roles to play in the Extended Program. These roles must be defined more adequately in the future.

More precise preplanning is necessary with respect to student recruitment and training; materials, equipment, curriculum identification; pupil enrollment; role definition; identification of pupil needs; college expectations from students; and students' expectations from R-1 as regards credit for salary increment. These concerns can be supplemented with others, many of which are spelled out in recommendations which support the two-year study.

In the following pages, the students and leaders of the 1965 and 1966 Extended Program have attempted to detail the scope and meaning of their efforts. This report represents the work of many. It is the result of hours spent for which compensation was small or non-existent. But it was prepared in the same spirit which has motivated an exceptional group of individuals to significant accomplishments. These pages cannot convey either the excitement engendered by those accomplishments or the pride which is associated with them.

The influence of the Extended Summer Program upon this school district has already been realized in part. Its influence has been realized in widespread efforts to improve teacher evaluation and self-evaluation. Curriculum writing has reflected the Extended Summer emphasis upon process as well as content teaching goals. In numerous elementary schools the open laboratory has provided a new dimension for learning opportunity. Through inter-disciplinary team planning, many teachers have discovered the value both of sharing time and talent and of integrating better the content goals of several subject areas.

The ultimate value of the Extended Summer Program, however, lies with the individual teacher's perspective of his task and in the improvement of his performance. The commitment of a summer to self-improvement is indicative of the personal and professional concern that is the foundation of education.

Jay Caton
Director, 1966
Summer Program

THE STUDY

Mahlon Amstutz
William Boland
Lloyd Carlton
Phyliss Cottle
Ilene Deane
Doris Richers
Jerald Watson
Ann Zoril

STATEMENT OF THE PROBLEM

The purpose of this paper is to: (1) describe the summer program in Jefferson County Schools R-1 during 1965 and 1966; (2) describe in detail the major aspects of the program as it evolved; (3) bring together the results of the evaluation of the 1965 and 1966 programs; and (4) propose specific recommendations for improvement for ensuing years.

METHODS OF PROCEDURES

The plan for evaluating the summer projects was developed by the R-1 Department of Research in cooperation with other administrative personnel as well as through consultations with college research consultants.

The procedure followed in acquiring data to answer the problems raised by this study was through the use of questionnaires, opinionnaires and interviews directed to principals, students (participating teachers), team leaders, observation team leaders, pupils and parents.

The basic questions posed are cited below. Each question in turn is dealt with at greater length in other sections of this study.

1. How effective were teachers in the implementation of their summer experiences during the regular school year?
2. Did teacher increase their understanding of and their ability to implement certain major concepts as the summer program progressed?
3. What did pupils think of their experiences in the summer program?
4. What learning activities did pupils experience?
5. Did parents feel that their children gained from the experiences offered to them during the summer program?

STATEMENT OF PURPOSE OF THE SUMMER PROGRAM

The purposes of the summer program were to provide students (teachers) with training and leadership in team teaching, nongrading, and effective staff utilization with the concomitant improvement of instruction for pupils. This program was not planned for remedial purposes but rather as an extension of learning into new facets of subject matter based on new types of instructional objectives related to them.

Teacher Objectives

The intent was to promote professional maturity and to increase leadership potential by engaging teachers in inquiries into the following:

1. Structure of the curriculum in language arts, social studies, mathematics and science.
2. The relationship of specialized subjects of art, vocal music and physical education.
3. The potential for pupil learning, and greater self-direction, which may be possible through problem solving.
4. The possibility for improving instruction through a thorough analysis of teaching.
5. Inquiry into the advantages and limitations of different patterns of nongraded instruction through use of decision making by team groups.
6. Investigations into problems involved in leadership exposure.
7. Dissemination of pertinent organizational patterns, methods and materials throughout the district.
8. The opportunity to adapt the curriculum, instructional procedures, and the processes of education to the needs of children.

Pupil Objectives

Another purpose of the summer project was to generate interest, excitement, and intrinsic motivation in each pupil by stressing inquiry and learning through curriculum materials and instructional techniques which capitalize on the best available learning theories. More specific goals for pupils were:

1. Stimulation of curiosity for learning.
2. Development of problem-solving ability.
3. Promotion of scientific attitude and critical thinking.
4. Exposure to beauty and its various forms with opportunity to express it creatively.
5. Encouragement of pupils to establish realistic goals and evaluate themselves in that relationship, leading toward self-responsibility for continuous learning.
6. Development of understanding through depth study rather than broad survey.

ROLE DEFINITIONS

This program entails assignment of personnel in a manner unique to the normal patterns of school organization. The roles described below should not be considered as rigid frameworks within which students (teachers) are confined. Rather it is an attempt to suggest responsibilities which were peculiar to a given position and to offer successful modes of operation to accomplish individual and collective tasks.

Pupils

Pupils were children who attended the summer session and who received instruction in the various disciplines during the morning hours.

Students

Students were experienced teachers, enrolled as graduate students in Colorado State College, who participated on planning, teaching and observation teams.

Director

The director of the summer school program had the responsibility of the overall direction of the total program at both the elementary and secondary level. Included in this function was responsibility for securing personnel in key positions, for budgeting and accounting, for public relations and publicity of the program,for contacting schools of higher learning, and for securing outstanding educators from throughout the country as lecturers and seminar leaders.

Coordinator

The program coordinators, one for elementary and one for secondary, were directly responsible to the director. Their tasks, though somewhat flexible entailed coordination of the program at the various sites and the articulation of progress within a given instructional level. Administration of the budget; planning for the functioning of the resource consultants, principals, team leaders and observation team leaders; and the encouragement of a high level of enthusiasm among these leaders were paramount for successful completion of this role. As the program progressed, the job of the coordinators entailed observation and informal conferences, direction, and coordination of the efforts of the principals and team leaders.

College Consultant

The function of the college consultant was to enroll students, interpret college requirements, and aid students in fulfilling requirements for graduate credit. In addition to being a liaison person between the district and the cooperating institutions, the college consultant advised students on their individual projects and provided counseling for members of planning, teaching, and observation teams as they defined process goals, interacted as team members, and as they interacted with pupils.

Principal

The principal was responsible for building administration and general direction of his school's operation. He coordinated the efforts of all teams, staff, and consulting personnel within the building. Administrative details of student registration, transportation, attendance, the procurement of materials, supplies and equipment, and general supervision of room usage and custodial preparation were all his direct responsibilities. The principal worked jointly with team leaders in securing facilities to implement the program. He discussed curriculum progress with team leaders individually, as a group, and also presided over general meetings of summer school personnel within his building. Administrative authority for the summer program was focused on providing the best educational environment for students as well as an optimum learning experience for pupils.

The principal acted as a mediator if problems arose among personnel within team membership student groups or consulting participants from outside R-1. He worked to keep all participants aware of their roles as members of sub-teams as well as their larger role in the total R-1 program. He was also responsible for implementing systematic arrangements for the evaluation of the program, reporting summarizations, and providing future projections and statistical records. The principal kept the coordinators informed of progress and planning in relationship to the program under his supervision.

Team Leader

The Team Leader had the responsibility for the total team. He provided leadership for the activities of the team members and he was directly involved with the planning sub-team when it was engaged in specific planning for its teaching period of the planning, teaching and observation cycle.

The Team Leader remained informed on the activities of the observation sub-team by joining the group whenever possible and by consulting with the Observation Team Leader. He provided for feedback from the observation sub-team to both the teaching sub-team and to the total team.

The Team Leader also provided for feedback from the teaching sub-team as it affected the work of the planning sub-team. He made quality decisions with respect to team operation and helped translate goals into operational realities. He called upon the Resource Specialist whenever there was need for this person's services in organizing subject content, in identifying suitable materials and equipment, and in identifying objectives.

Assistant Team Leader

The Assistant Team Leader was an extension of the Team Leader and took over the functions of the latter in his absence He was well informed regarding the activities of all the sub-teams and was called upon to assist in working with individual pupils.

Observation Team Leader

The Observation Team Leader had direct charge of the sub-team that was observing and analyzing the program and the performances of the teaching team. He had the task of teaching students to observe and analyze teaching. He also supervised the communication of the analysis to the student observed so that the perceptions of the student, relative to the effectiveness of his teaching performance, could improve.

He assisted the observation sub-team in observing and in gathering data about instruction, in analyzing data, and in conducting critique sessions with the students observed. He ascertained whether written plans were prepared by the members of the teaching and planning sub-teams and were available to the members of the observation sub-team

Instructional Materials Specialist

The Instructional Materials Specialist was responsible for the operation of the instructional materials center. The center was a place where tangible ideas were housed and distributed to the classrooms. The center contained books, films, filmstrips, audio-visual equipment, maps, pictures, pamphlets, tapes, recordings, resource visitor and field trip files, and other physical equipment. The Specialist not only provided for systematic acquisition and arrangements of materials, but also insured multiple uses of these materials. By being in constant contact with principal, team leader and team members, it was possible to obtain direction and anticipate materials needs. Orientation was provided for children in the use of the library and equipment. A professional library pertinent to the summer program was maintained.

Team Teaching Assistant

The Team Teaching Assistant performed duties as delegated by the team. These duties were related to the instructional program and could be accomplished by a para-professional person or by a certified teacher assigned to this role. Such assistance relieved team members of noninstructional tasks and allowed them to perform more effectively those professional duties related to teaching. The Team Teaching Assistant could maintain records of attendance, record periodic evaluations of achievement, or prepare instructional materials by typing masters of tests, work sheets, answer sheets and course outlines. The Team Teaching Assistant maintained copies of tests, pupils, cumulative folders, and reproduced weekly and daily lesson plans. The Team Teaching assistant also served as secretary for the team in its meetings to insure accurate records of objectives and plans of instruction.

Tutors

Tutors were utilized for reading instruction for children who would benefit most from a one-to-one relationship or small group instruction. It was the responsibility of the tutor to diagnose the reading difficulty and then apply remedial techniques in an effort to correct those difficulties. Consultation with team members and reporting pupil progress to parents were other important functions of the tutor.

Secretary

The secretary of the summer school performed delegated assignments from the principal. The scope of the assignments was vast and included correspondence, preparing and submitting reports of accounting to the central administration building. Assistance to team leaders and other personnel was also requested of the secretary.

Consulting Staff

The consulting staff was basically composed of two groups: (1) professors from cooperating and interested colleges and universities, including educators of national stature from throughout the country, and, (2) R-1 resource consultants. The former usually participated in the afternoon lectures and seminars, and met with planning and teaching sub-teams in defining process goals, or in analyzing strategies used to attain these goals. The latter group, being specialists in their respective subject areas, were vitally important in the early stages of curriculum planning. Through their knowledge, impetus could be generated to experiment with new programs, flexible scheduling, and new approaches to teaching content in their respective disciplines. As the program progressed, they were on call to help evaluate and give direction to methods and techniques employed.

PROGRAM ORGANIZATION FOR STUDENTS

"Students" in this report refers to experienced teachers who were enrolled as graduate students at Colorado State College, Greeley, Colorado, and who participated in teaching, analysis and planning teams. The students were divided into twelve-member teams and worked under the leadership of Team Leaders and Consultants. The students set the level of expectation and expressed them in terms of performance goals. They also developed techniques for teaching to accomplish these goals and made decisions relating to the effectiveness of progress toward these goals.

Participating students received graduate level credit from the cooperating college for the practicum participation, and for the seminars and other in-service work during the afternoon.

Seminar

Seminars were regularly scheduled during the seven-week sessions. Each seminar was planned and structured to achieve a pre-determined purpose. The seminar provided students with a unique opportunity to build concepts and opinions on the basis of knowledge. It provided a unique setting for the guided discussion of new and controversial issues in education. Evidence of the quality of the seminars is demonstrated by the following list of consultants who spent days or weeks working with the staff:

Dr. Dwight Allen, Stanford University
Dr. Paul Marsh, Massachusetts Institute of Technology
Dr. Robert Anderson, Harvard lUniversity
Dr. Glen Gray, Colorado College
Dr. Glen Brooks, Colorado College
Mr. John Holt, author and teacher of English at the Commonwealth School in Boston

Dr. David Hawkins, Director, Elementary School Science Project, Boulder, Colorado
Dr. John Meier, Colorado State College. Dr. Meier worked with the program all summer as liaison between Colorado State College and the Jefferson County School District.
Dr. William Perchlik, Colorado State College

Practicum

The program was planned to offer experienced school personnel, through team organizational patterns, an opportunity for supervised inquiry and experience in the fields of instruction, supervision, and analysis. It was designed to provide training in leadership in team-teaching, nongrading, and in effective staff utilization. The program required participation in analytical criticism with the expectation that participants would acquire a fuller understanding of professional leadership.

P.T.O. Cycle

Each team of students was sub-divided into teams of four, working in a "cross-country" or interdisciplinary instructional organization. During the first three weeks of the program, each of the student sub-teams rotated on a weekly basis in (a) planning for teaching, (b) actual teaching, (c) observation and analysis of teaching. Experienced team leaders who were specialists in observation and analysis of teaching provided direction and supervision.

In the planning phase of the cycle, emphasis was given to the construction of the lesson plan. While the term "lesson plan" was often used to designate the content to be covered during a period of time, it was more than that. It was the procedure by which performance goals, content of instruction, strategy of presentation, and evaluation of results were integrated into a meaningful whole. It was the blue-print by which behavioral change could be accomplished.

The team had the responsibility for cooperative instructional planning. Its attention was directed to the clarity of aims, and to the statement of objectives which included: (a) the identification of the processes by which the learner was to discover, assimilate, and manipulate knowledge; (b) the choice of subject matter content to be used as a vehicle; (c) the criteria of performance that would be considered acceptable; and (d) the kind of terminal behavior desired. Samples of typical lesson plans are found in Appendices A, B, and C.

During the teaching phase of the cycle students carried out their plans for instruction. The team leader coordinated their efforts. Frequently the sub-teams planned together in order to facilitate a continuous experience.

The observation phase of the cycle included gathering data about instruction, analyzing that data, and conducting critique sessions with the students observed. While there was no single model of good teaching - every good teacher presented a different model based on training, experience, intuition, and imagination - good teaching was that which resulted in a predetermined and desired outcome. The measure of success of any lesson was the degree to which it contributed to stated objectives.

Quite often, however teachers were not aware of the patterns of behavior which they had adopted for use. When made aware, one could often modify behavior in such a manner as to make one's instruction more effective. Classroom visitation by observers who had as their objective the study of the dynamics of the class assisted in providing the teacher with insights not otherwise attainable.

Classroom visitation with this objective in mind required planning and strategy related to observation, data collection, data recording, data interpretation, etc. The scope of such an excerise may have seemed ominous to the teacher being observed. If it was recognized that this observation was designed to improve instruction and not to serve as an attempt at value judgements relative to "merit" as a basis for promotion or pay increase, there was less threat associated with the experience.

For effective analysis of teaching behavior it was necessary for the observer to study plans prior to the visitation. It was adviseable for him to plan a strategy of observation to carry out this strategy while in the classroom, to analyze the data, and to hold a conference with the teacher observed. Successful completion of these functions required the observer to have: (1) a copy of the daily lesson plan, (2) the opportunity to sit near the front of the room to observe students (rather than at the back to observe the teacher, (3) the means of writing voluminous and detailed notes and (4) some feedback from the teacher as to his general feeling in regard to the lesson.

During the final three weeks of the program, the team had the freedom to determine its own pattern of operation and scheduling so that each sub-team would participate in further planning, teaching and analytical observation. This flexibility provided a situation more nearly like the program which might operate in a typical, team-teaching school during the regular school year.

Video-tape

The video tape machine was utilized by students to improve their instructional techniques and to record large-group lectures by visiting consultants. The machine provided an opportunity for students (teachers) to constructively criticize their own efforts. When students (teachers) were able to watch themselves on the television monitor, they were able to perceive more than students who received only verbal feedback from fellow team members. The immediate feedback, which the video-tape provided, helped to modify teaching performance through self-evaluation.

The video-tape was also utilized by students for micro-teaching lessons. Micro-teaching was a scaled-down teaching episode in which students were required to teach brief lessons (5 to 10 minutes) to a small group of pupils (up to 5). These brief lessons on video-tape recordings provided a convenient vehicle for evaluation.

INSTRUCTIONAL ORGANIZATION FOR PUPILS

Team Teaching

"Team teaching" as defined by the Jefferson County R-1 summer program was an organization for instruction composed of students (teachers) and pupils. The team members were given the responsibility for all of the instruction of a group of pupils.

If team teaching is to improve the quality of instruction, it will do so by identifying and helping pupils attain the basic goals of education. The goals accepted in the summer program were grouped into three categories - content goals, process goals, and personal-social goals. Content goals were concerned with learning about a subject. Process goals related to learning those competencies, interests, and habits needed in acquiring, evaluating, or using knowledge in any subject. Personal-social goals had to do with identifying those characteristics related to social effectiveness, personal well-being, and a style of life. A more complete identification of these goals is found in Appendix D.

The prime requisite for effective team teaching is teacher cooperation. Team teaching can foster any given educational goal when team members can direct their collective efforts toward that goal. This cooperation under the guidance of the Team Leader provided opportunities for increasing the competencies of students (teachers). The team was responsible for the instructional program of all pupils assigned to the team. Through cooperative planning, teaching, and evaluation, each subject could be structured to meet the different needs of pupils.

Team teaching offers opportunity for improving ways of utilizing existing materials, facilities, methods, and personnel. In the team, members may specialize in large-group, small-group or individual instruction, depending upon personal competencies and experience.

1965 Elementary Team Teaching

Devinny Elementary School, designed for team teaching, was the site for the 1965 summer program. Approximately 400 pupils in grades two through six participated in the program.

The pupils were divided into four teams with each team consisting of 100 pupils and twelve students (teachers). The twelve students (teachers) were sub-divided into three sub-teams of four students (teachers) with each team having a Team Leader, Observation Team Leader and a Team Teaching Assistant. Of the eight leaders, only one had had experience in team teaching.

During the final week of the 1965 program the Team Leaders and the Observation Team Leaders made several recommendations for the 1966 program. The recommendations were based on the problems they had observed throughout the summer, and those which their team members had experienced.

A major concern of the majority of the teams was that the P.T.O. Cycle created problems in articulation since new instructional goals from week to week were altered as roles were changed.

This problem evidenced a direct relationship between over-emphasis on content orientation as opposed to process orientation. Content orientation led some to be extremely concerned that what happened on Friday should be followed very closely by what happened on Monday. On the other hand, those who were process-oriented were more concerned with general themes or underlying ideas being developed and less concerned with the development of a logical sequence of specific learning activities.

The Team Leaders and Observation Team Leaders felt that this was due in part to their inexperience. They, too, were novices in the process-oriented curriculum. The recommendation made by them for 1966 was to secure people as Team Leaders and Observation Team Leaders who had gone through the 1965 program.

The problem of planning time reoccurred in discussions and in responses to questionnaires. Students (teachers) were asked if this urgent need for more planning time had changed or remained the same during the later stages of the program. The majority of students (teachers) felt that time was more nearly sufficient during the later stages of the program than at any other time.

During the 1965 program outside speakers addressed the students (teachers) daily during the first two weeks. This cut into the planning and evaluation sessions. The 1965 summer staff recommended that each speaker brought into the program give one large-group presentation, preferably on Tuesday, and the remainder of the time be spent in seminars with the planning and observation sub-teams. They felt that more would be gained if the speaker could work side by side with them in their planning and give them guidance and direction in their specifc problems.

One team, which was composed entirely of women, felt that the addition of male members to their team would have been very beneficial in terms of leadership and different perspectives. They recommended that at least three men be assigned to each team, one for each sub-group.

Many of the students (teachers) and principals felt that some of the instructional and grouping patterns, methods and techniques which they had experienced during the summer could not be used during the regular school year because their buildings were traditionally designed. However, they recommended that the 1966 program be located at a traditional site.

The special subjects, art, music and physical education, were not an integrated part of the program. Each subject was taught in isolation. The teachers in these areas recommended that they become involved in team planning and in the analysis of instruction.

1966 Elementary Team Teaching

Bear Creek Elementary School, a building with traditional design, and Devinny Elementary School were the sites for the 1966 summer program. Approximately 500 pupils in grades one through six participated in the summer program.

The pupils were divided into five teams. Three teams were housed at Devinny and two teams at Bear Creek. Four teams consisted of approximately 100 pupils each with twelve students (teachers). One team at Devinny had a nine-member teaching team with sub-teams of three members.

Out of the ten leadership roles, i.e., Team Leaders and Observation Team Leaders, nine had had experience in the Jefferson County R-1 Summer Program.

During orientation, each team spent time developing over-all goals and units of study for the six-weeks program. These goals were process-oriented. This gave teachers an over-all view of what was going to happen; and, therefore, planning and teaching seemed to be better articulated.

The special subject teachers were assigned to specific teams. However, the problem of articlation between the special subject and the academics subject was not solved. Special subject teachers did not become involved with the total planning nor with the analysis of instruction.

At the end of the 1965 summer session at Devinny Elementary, the decision was made to attempt a summer program in a traditionally designed building. As a result, two teams were placed at Bear Creek Elementary. Students (teachers) felt, at the end of the 1966 summer session, that the building design caused frustrations at times, but that this did not prevent them from having this type of program in a traditionally designed school. Non-connecting rooms were a limiting factor since all traffic had to move along hallways.

There was a definite need felt for space to accommodate groups of various sizes. Large group instruction was used and group sizes changed frequently. This meant that the cafeteria, or all-purpose room, had to be used for this purpose.

The pupils on each team at Bear Creek Elementary covered a span of three grade levels. The students (teachers) on both teams felt that this presented some problems. Under this structure, students were much more aware of the range of individual pupil needs. This was an incentive to provide better for individual differences.

In evaluating team efforts, team leaders used both subjective and objective measures. The subjective evaluations included records kept by team leaders of those who made substantial contributions to the development of team decisions or displayed leadership qualities at times when they were most needed. In addition, team leaders observed the degree of team spirit. Team leaders attempted to evaluate the degree to which teachers were willing to relinquish some of their personal biases in favor of activities beneficial to the total pupil team.

One objective evaluation used was a socio-metric device (See Appendix F). The information from this device was compiled by the college consultant to better understand his relationship on the team. Each student also wrote a self-critique on his performance as a team member (See Appendix H). This information was also given to the college consultant.

In addition, the Team Leader and Observation Team Leader completed a colleague evaluation form for each team member (See Appendix I). The college consultant used these objective measures, as well as subjective judgments, in arriving at a grade for each participant on the team.

1965 and 1966 Junior High Team Teaching

In order to develop guidelines for the analysis of instruction, one of the teams at Creighton made the following statement in 1965: 'This team supports the belief that maximum pupil involvement is essential to successful education; therefore, the members of the team are interested in the analysis and evaluation of pupil self-involvement." All teams have since focused on this idea

Self-Involvement is defined as:

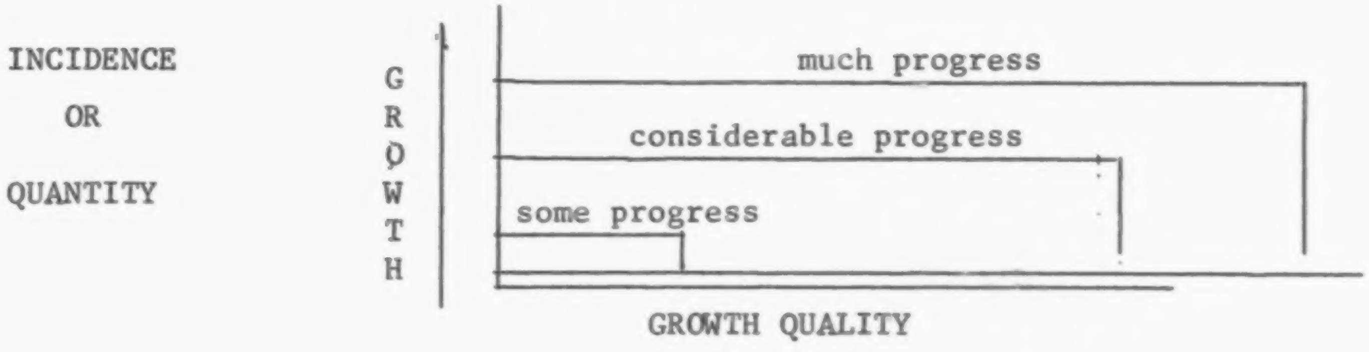
1. Participation in learning activities
2. Exhibition of willingness to accept and to assume meaningful responsibilities as individuals and roles as members in group activity.
3. The frequency and quality of independent work.
4. The ability to analyze one's own needs and the resources available for meeting these needs.

The teams have also been concerned with affecting improvement in the processes associated with learning. It was felt that such improvement would enhance the capability of the child to become an independent learner. The faculties have focused on analysis and evaluation of the following (both in 1965 and 1966):

Learning Process Improvement:

1. Skills associated with inquiry and discovery:
    - a. Research skills associated with findings, knowledge
    - b. Critical thinking skills associated in analysis of knowledge, the development of hypotheses, the ability to evaluate hypotheses and to generalize from them.
    - c. Skills associated with making intellectual discrimination.
2. Skills related to communication:
    - a. Expression
    - b. Writing
    - c. Reading
    - d. Listening

The teams felt that if the child was encouraged to perfect his means of acquiry-simulating (a-s), and disseminating information, education would be a lifelong process for him. It was believed that, if emphasis could be placed on the positive increase in involvement, growth could be graphically represented. A model for growth was depicted as:


INCIDENCE
OR
QUANTITY
GROWTH
much progress
considerable progress
some progress
GROWTH QUALITY

Nongrading

The Jefferson County R-1 Summer Program was nongraded. In the nongraded elementary summer program pupils were in a team of similarly aged pupils where they paced their own learning. Instead of being in a grade, a pupil was in a specific team. On the secondary level, grouping was completely heterogeneous without regard to age, ability or interest.

The expectancies were placed in terms of the individual's interests, needs, and abilities rather than in terms of a grade norm or standard. The curriculum was organized around the pupil and was flexible. Instruction was determined by the character of the problem and the pupils current level of understanding. Graded textbooks became aids rather than guides in organizing learning experiences.

Such an organization required skilled Team Leaders who had professional training in the social, psychological and philosophical foundations of education. Students (teachers) through observation and analysis of instruction and evaluation of pupil progress concentrated their efforts on the individual child.

1965 Elementary Nongrading

The 1965 summer program included pupils from grade two through six. The following shows the grade level span:

Team A - second and third grade pupils
Team B - third and fourth grade pupils
Team C - fourth and fifth grade pupils
Team D - fifth and sixth grade pupils

Various forms of grouping were used during the 1965 summer program. In determing which fifth grade pupils would be grouped with sixth grade pupils and which would be grouped with fourth grade pupil, a simple criterion of "first come, first served" was used. Fifth graders who first enrolled for the program were placed in the team with sixth graders. Those who enrolled later were placed with fourth graders to fill out the team. The same criteria was used for all placement.

One team formed a homogeneous group in the areas of language arts and mathematics while leaving groups as hetergeneous as possible in science and social studies. In social studies, interest was sometimes used as a basis for grouping. Another team used ability grouping in the areas of mathematics, social studies, science, and language arts. Small groups were used for reading instruction. The criterion used was general ability indicated by past performance records. Still another team began grouping by random arrangement and regrouped its pupils based on the achievement and ability they had shown during the previous week.

A major problem which reoccurred throughout the summer program was that of being able to diagnose a pupil's needs and interests at the beginning of the program. Materials sent from the home schools were generally inadequate in terms of information concerning a child's area of competence relative to developed standards.

Two teams divided their pupils into twelve advisee groups of eight or nine children each. All children were placed without regard to age or grade. Fifteen minutes each day was set aside for counseling.

These teams recommended that more individualized instruction was needed. Pupils were taught too often in groups of twenty-five. They further recommended that pupils be given a diagnostic test prior to the opening of the 1966 summer program to determine their particular needs.

Problems existed with some sixth grade pupils. It was recommended that sixth grade pupils be given a choice in attending either the Junior High summer program or the Elementary summer program. Second grade pupils adjusted the program quickly and with much enthusiasm. This led to the recommendation that first grade pupils be included in the 1966 summer program.

1966 Elementary Nongrading

The 1966 summer program included pupils in grades one through six. The following shows grade level span:

Team A - first and second grade pupils
Team B - first, second and third grade pupils
Team C - third and fourth grade pupils
Team D - fourth, fifth and sixth grade pupils
Team E - fifth and sixth grade pupils

All five teams divided their pupils into twelve advisee groups. Two out of the five teams had a daily fifteen minute team conference at which time each student (teacher) reported to the entire team pertinent information which he had gained from his advisees. This procedure enabled quick revision of instructional plans where necessary.

Diagnostic testing in reading was done in all five teams. The tests were given to all boys and girls reading below grade level and to those pupils where some doubt existed. Four teams did diagnostic testing in mathematics. Sub-grouping within a team was thereby accomplished for more effective individualized instruction.

Individualized instruction increased during the 1966 program. Open laboratories were used by all five teams. The open laboratory concept is described in a later section of this paper.

1965 Junior High Nongrading

The initial structure for nongrading in the junior high program was begun at Creighton during the 1965 summer program.

The enrollment included 7th, 8th, and 9th graders, selected and divided randomly into two teams of 100 pupils each. Teams of teachers were responsible for grouping these 100 pupils, and each team chose a pattern slightly different from the other to accomplish this.

Team B decided to distribute their pupils into four groups: Seventh graders were first distributed throughout the four groups. Then eight and ninth graders. There was an attempt made to avoid placing many pupils from one junior high into one team. The distribution resulting from this arrangement was approximately 50% seventh graders, 25% eighth graders, and 25% ninth graders in each of the four sub-groups. The ratio of boys to girls was approximately two to one.

Team A chose to group pupils on a random basis. The only criterion being an equal distribution of boys and girls as far as was possible. Maturity level as determined by subjective opinions of the total team was used by team B to regroup pupils after the third week. This was determined because of differences in maturity which members of this team felt were most pronounced at this level. Pupils were regrouped into two groups of more mature pupils and two groups of less mature pupils. Each group still contained all grade levels of pupils. Individual teachers then grouped within these four major groups to meet individual differences.

Team A adjusted their grouping arrangement, using interest in a particular subject as the main criterion. Specialized interest on the part of pupils within each subject led to intraclass grouping to meet individual needs.

Team B felt that individual differences could be better met in the future if the junior high program would include only those pupils entering grades 7, 8, and 9 and not pupils entering grade 10. They also felt that more thorough records of entering pupils might provide a better basis for grouping at the beginning of the program.

1966 Junior High Nongrading

The enrollment for the 1966 program at Carmody was non-selective. A basic change, however, was the admission of sixth grade pupils. Ninth grade pupils were placed in the high school program. The 170 junior high pupils were randomly divided into two groups.

Team A assigned each of its teachers an equal number of "counselees." Team B divided its pupils into four sub-groups. Enrollment percentages were as follows·

22% sixth graders

35% seventh graders

43% eighth graders

It was not thought necessary to regroup the pupils since independent study was a focal point of the program. Pursuant to this was the tendency for pupils to group themselves, particularly as special interests were supported by programs. During unscheduled time pupils were free to pursue independent study programs in one of several resource centers.

One alteration in the total junior high program from the previous year was the development of the "total team". Areas in which this proved valuable were:

Curriculum development
Problem solving
Joint decisions involving parent-teacher conferences
Joint decisions involving student behavior and discipline
Joint pedagogical "brainstorming"
Joint decisions involving student evaluation

In 1966 another member was added to each team in the person of the Reading Specialist, who implemented remedial and developmental reading laboratories.

LEARNING EXPERIENCES FOR CHILDREN

The underlying belief that forms the basis for the Jefferson County R-1 summer program is that learning takes place more effectively when the student is challenged and interested. The summer program attempts to engage pupils in active processes of group discussion, inquiry, and problem solving.

The process curriculum is one which provides opportunities for capitalizing on the interests of pupils through the wide variety of choice, made available when process rather than content becomes the focus of the learning process. The program attempts to create methods of instruction that will meet individual differences. Differentiated assignments, group work and the use of varied sources, rather than a single text, are all aspects of the program.

In order to see the continued growth of the Jefferson County Extended Summer Program, included below is a brief comparative summary of the curriculum matter studied

ELEMENTARY

Science

1965	1966
One group utilized balance boards while three groups explored the phenomena involved in freezing and melting ice cubes.	Three teams undertook the ESS Bones Unit which helped them identify skeletons in terms of function and structure. Another team was involved in the study of light, its effects on plants, on man, and the principle of refraction. This same team did a companion study on shadows and how they are made, altered, and compared Peas and Particles and

1965	1966
	and Mystery Powders were the vehicles to utilize the scientific methods of inquiry in problem solving.

Social Studies

One group considered the underlying base of economics. Pupils established a bakery and visited two banks to learn about the financing of their business. Three groups studied ancient civilizations, each considering Rome, Egypt, and Greece with an integration of many subjects, including music and art.	The success of last year's economics unit on the primary level led to an extended study of the relationship of producer to consumer. Other cultures and their relation to ours was the focal point of another team.

Language Arts

Creative approaches were taken to reading, writing, and listening. Special emphasis was placed upon listening critically.	Reading was emphasized in order that each individual might successfully experience an improved level of performance and interst. Several teams placed a special emphasis on critical reading. Special tutorial services were provided for individual remedial problems.

Mathematics

Within the modern math framework attention was devoted to graphs and factors of probability.	The basic mathematical processes were reinforced through novel approaches to meet the observed needs of the pupils and to view problem situations more critically.

Physical Education

The pupils had the experience of moving from station to station to work on various conditioning activities.	Attention was focused on flexibility and coordination. The use of the trampoline, rhythmical exercises, and games of low organization were the means of accomplishing this goal.

Art

Opportunity was given for work in oils, sculpture, plastic and cloth media.	Exploration was encouraged through the use of varied materials such as: clay, stitchery, paper sculpture, drawing, and painting.

Music

1965	1966
Using the instruments designed in Europe by Carl Orff, the students had an opportunity to develop self-confidence in their own creativity.	Further development of the Orff instruments was extended to include body rhythms, original accompaniment, instrumental ensembles, improvisations, creative listening, and play.

SECONDARY

Science

Students made individual investigations, using gases and air as the media for inquiry. Skills used included observation, formation of hypothesis, gathering data, drawing inferences, making measurements, graphing, and the use of experimental controls.	The science program was concerned with earth changes. Topics included different kinds of change, differences between observation and measurement of change, classification methods for identification of various rock types, etc. The last part of the course was concerned with the principles governing the flow of energy, particularly with respect to earth heat transfer.

Language Arts

Using Japanese literature as a medium, consideration was given to the development of language and the use of symbols. Reading and interpretation of Japanese myths, legends, poetry, and drama provided the depth not normally available at the junior high level.	Through the use of mass media the language arts classes investigated advertising, propaganda factual reports, editorials, special events and drama. These forms of communication were analyzed for point-of-view, purpose, structure, and tone.

Vocal Music

Attention was centered upon an investigation of notation, music signs and symbols. The autoharp and ukelele provided a means of expression and many pupils wrote original selections.	Attention was paid to the use of the Orff metric technique, and the music program concentrated on helping the pupils to understand the simple melodic and harmonic structure, the ability to hear one melodic line against another, rhythmic precision, and ensemble music.

Physical Education

Stress was upon helping students gain skills in physical fitness exercises and to give them an understanding of the structural reasons for muscular tonation. Trampoline, gymnastic, apparatus and musically coordinated body building was the means for instruction.	The program concentrated on rope skipping, from basics to advanced work. Also stressed was conditioning that could be used in both teen years and later life. An open lab was also conducted where the pupils had the opportunity to take part in activities of their choice. The latter part of the program concentrated on flexibility exercises. This was accomplished through trampoline, and basic tumbling.

1965	Reading Program	1966
		Included in this year's curriculum was a special reading program. The reading specialists set up an open lab where they encouraged pupils to identify some reading area in which they would like to improve, and then handled these pupils in terms of appointments where individual continuous progress schedules were set up.

In terms of scheduling during the 1965 session much was accomplished in in terms of flexible scheduling and the use of special equipment rooms. Flexible scheduling and individual instruction were again stressed during the 1966 session. Greater attention was given to the use of resource centers and independent and small-group study.

Grouping

One of the main advantages of a team teaching organization is the variety of grouping arrangements possible. Subject matter, and the activities suitable for the presentation of the particular subject matter, indicate the criteria by which the total team is grouped to form the most appropriate instructional unit.

Large Groups

The purpose of large group instruction are:

1. To provide for more efficient use of audio-visual aids and resource personnel.
2. To make better use of teachers by eliminating repetition.
3. To provide a setting for presentation of a concept.
4. To free staff for other activities (preparation, small-group and individual teaching).

Small Groups

Advantages of small group activity are:

1. To permit opportunities for exploration and discussion of an area of interst.
2. To evaluate growth in a skill or curriculum area.
3. To gather together pupils of a similar skill level for the purpose of further developing the skill.
4. To allow opportunities for pupils to work on specific projects together.

Independent Study

Purposes of individualized study will vary when particular areas of a curriculum are considered separately. In general, however, independent study grants:

1. Needed practice to reinforce initial learning.
2. Development of specialized talents.
3. Permission to explore special interests in depth.
4. Counseling for unique problems.

Tables I, II and III summarize the frequency of various sized groups. Tables IV, V and VI report length of time spent under the direction of one or more teachers for a specific task. Appendices E and F show the log of pupil activities used to gather this data obtained over a three-day period through random sampling of the seven elementary and junior high teams.

REPORTING PUPIL PROGRESS

Pupil progress was reported by means of parent-teacher conferences and a final written evaluation mailed to parents.

In 1965, one team at the primary level used a weekly evaluation sheet marked by teachers. Another team used a check list procedure completed by the teaching sub-team and passed on to the teaching sub-team and passed on to the teaching sub-team in subsequent weeks. In addition, samples of pupil seatwork with teacher remarks in margins were kept. Before the final parent evaluation letter, teachers met and discussed the progress of each pupil. The pupil's advisor summarized these opinions and held the parent-teacher conference.

More flexibility in evaluating pupil progress was evidenced in the 1966 program. In order to diagnose more effectively the needs of the children, one intermediate team met daily on a one-to-one basis with their pupils. In addition, several of the teams met daily to share observations of pupils. The teaching sub-teams and observation sub-teams contributed significantly to these sessions. The teaching sub-team was most effective in reporting daily academic progress, while the observing sub-team could better view the emotional and social aspects of the teaching-learning situation.

Progress of remedial reading pupils was evaluated daily by the reading tutors, and reported to the advisor of each individual child.

Two primary teams kept annotated logs. One team attempted to develop self-evaluation by having the pupils keep their own progress records. The other primary team compiled an anecdotal log plus individual pupil worksheets.

Constant dialogue among personnel of the Child Study Services and the team members was maintained to assist in evaluating a-typical problems of particular children.

Open Laboratory

Introduced into the 1966 Extended Summer Program was the concept of the open laboratory. A prime function of the open laboratory was to free pupils, staff and facilities from unnecessary time restraints while increasing the range of individualized instruction. This was accomplished by providing a variety of materials and equipment in a learning center that was open to individual pupils.

During the orientation period to the open lab the pupils experienced some anxiety in adjusting to a non-directed teaching method. However, the novelty of the situation along with the challenge was incentive enough to entice the pupils to make the adjustment to the new learning experinece.

The open laboratory was used by all teams on the summer program. Each team faced the problem of reporting pupil progress in slightly different ways. One primary team had the pupils keep their own log activities. An intermediate team experimented with contracts. The most successful form allowed the pupils to choose from a list of varied activities with a minimum requirement stated in the contract. One highlight of the contract method was the experience the pupils gained in executing a document in the presence of peer witnesses

SUPPORTING DATA

It should be noted in comparing the figures that in the 1965 program the Primary Team consisted of approximately 100 pupils. In 1966, the approximate number in the Primary teams was doubled.

TABLE I

Frequency of Various Sized Groups
Reported During a Three Day Period by Primary Teams

No. of Pupils in Group	Frequency Shown on Teacher Logs	
1965-1966	1965	1966
1-5	0	61
6-15	6	14
16-30	55	12
31-100	8	12

The Intermediate Teams in 1965 consisted of approximately 200 pupils while in 1966 there were approximately 300 pupils

TABLE II

Frequency of Various Sized Groups
Reported During a Three Day Period by Intermediate Teams

No. of Pupils in Group	Frequency Shown on Teacher Logs	
1965-1966	1965	1966
1-5	0	105
6-15	3	16
16-30	49	22
31-100	8	12

It should be noted in comparing the figures that the number of pupils in the 1965 and 1966 Junior High Teams was approximately the same.

TABLE III

Frequency of Various Sized Groups Reported
During a Three Day Period by the Junior High Team at Carmody
As Compared With the Various Sized Groups Reported Last Year
During a Three Day Period by the Junior High Team at Creighton

No. of Pupils in a Group	Frequency Shown on Teacher Logs	
1965-1966	Creighton 1965	Carmody 1966
1-5	3	19
6-15	11	[illegible]
16-30	9	[illegible]
31-100	7	[illegible]

TABLE IV

Length of Time Reported Spent Under The Direction of One or More Teachers For a Specific Learning Task(s) by Primary Teachers

Time Interval in Minutes	Frequency Shown on Teacher Logs 1965	1966
15	0	12
20	5	0
25	1	4
30	10	[illegible]
35	5	[illegible]
40	10	4
45	12	7
50	1	0
55	8	0
60	4	8
65	0	0
70	4	0
75	4	0
80	0	0
85	4	0
90+	0	12

TABLE V

Length of Time Reported Spent Under The Direction of One or More Teachers For a Specific Learning Task(s) by Intermediate Teams

Time Interval in Minutes	Frequency Shown on Teacher Logs 1965	1966
15	0	34
20	1	0
25	3	4
30	12	40
35	2	4
40	9	9
45	24	19
50	0	1
55	0	0
60	7	30
65	0	3
70	0	1
75	0	8

TABLE VI

Length of Time Reported Spent Under the Direction of One or More Teachers for a Specific Learning Task(s) by the Junior High Team at Carmody as Compared with the Length of Time Reported Spent Under the Direction of One or More Teachers for a Specific Learning Task(s) by the Junior High Team at Creighton

Time Interval in Minutes	**Frequency Shown on Teacher Logs** Creighton	Carmody
15	4	1
20		11
25		0
30	7	4
35		0
40		3
45	20	0
50		2
55		0
60	8	3
65		0
70		2
75	5	0
80		0
85		0
90+	1	10

CHANGES IN TEACHER BEHAVIOR

A primary purpose of the Jefferson County R-1 summer program was to train teachers in the use of new forms of school organization, in the techniques of developing a process-oriented curriculum, in the implementation of this curriculum through the use of new materials and techniques, and in assimilating the educational theories and practices associated with them.

For in-service training to be effective, implementation of what was learned should be evident in the regular classroom. In an attempt to determine if the 1965 summer program in-service had this effect, an opinionnaire was given to those teachers who had participated in the 1965 summer program. Teachers were asked, as a result of their 1965 summer experiences, their degree of participation in the areas of scheduling, individualizing, teaching, and planning during the 1965-1966 regular school year.

Teachers participating in the 1965 program represented forty-nine schools in an attempt to verify degree of participation the same opinionnaire was given to the respective principals of the 49 schools. The responses of the teachers and Principals were summarized in Table VII. It should be noted that the items are placed in rank order according to composite weighted scores and do not appear in the same order as on the opinionnaire. The actual opinionnaires are found in Appendices F and G. A 63 per cent return was obtained from teachers and a 69 percent return from Principals.

TABLE VII

CHANGE IN TEACHER BEHAVIOR

Items were placed in rank order according to teacher's opinions.	Teacher Opinions		Principal Opinions	
	CWS	Mean	CWS	Mean
1. Willingness to try new ideas.	207	3.90	192	3.62
2. A change in attitude toward personal professional improvement	195	3.68	149	2.81
3. More effective use of varied instructional materials	194	3.66	184	3.49
4. Individualized instruction	191	3.60	168	3.16
5. More precise objectives stated in lesson plans	189	3.57	179	3.37
6. Grade level or cooperative planning	175	3.30	179	3.37
7. Try to initiate new ideas in the building	173	3.26	158	3.98
8. Flexible scheduling	138	2.60	143	2.69
9. Met with opposition from staff members	127	2.40	102	1.92
10. Teacher colleague observation	106	2.00	122	2.30
11. Micro-teaching and use of video-tape	73	1.38	90	1.69
12. Opposition from principal	70	1.32		

Professional Growth of Teachers

An instrument was designed to measure the professional growth which students (teachers) experienced during the 1966 summer program. The opinionnaire was administered at the end of the second and fifth weeks. The responses of the students (teachers) and team leaders are summarized in Table VIII.

TABLE VIII

PROFESSIONAL GROWTH OF TEACHERS

	Teacher's Opinion			Team Leader's Opinion		
	2nd week	5th week	Gain	2nd week	5th week	Gain
1. How well do you understand the goals of education?						
A. good understanding and can teach for them	36	59	24	11	58	36
B. good understanding	25	26		37	26	
C. fair understanding	37	14		32	12	
D. not developed an understanding	2	2		20	4	
2. How well do you understand how to teach for the goals?						
A. good understanding and can teach for them	28	52	29	10	44	39
B. good understanding	30	35		34	39	
C. fair understanding	42	13		38	14	
D. not developed an understanding	-	-		18	3	
3. How well do you understand how to evaluate pupil growth in relation to the goals?						
A. good understanding and can teach from them	21	37	32	15	45	55
B. good understanding	29	45		24	39	
C. fair understanding	49	16		41	15	
D. not developed an understanding	1	2		20	-	
4. How confident do you feel in developing strategies for teaching different groups?						
A. very confident	21	28	9	23	49	33

TABLE VIII (continued)

PROFESSIONAL GROWTH OF TEACHERS

	Teacher's Opinion			Team Leader's Opinion		
	2nd week	5th week	Gain	2nd week	5th week	Gain
4. (continued)						
B. confident	68	70		31	38	
C. not too confident	10	2		35	12	
D. do not have this ability	1	0		11	11	
5. How do you understand the advantages and disadvantages of team teaching?						
A. good understanding and can explain them to others	28	60	29	16	77	42
B. good understanding	43	40		39	20	
C. fair understanding	29	-		30	3	
D. not developed an understanding	1	-		14	-	
6. How well do you think you could operate or supervise an on-going team teaching operation?						
A. very well	13	27	29	15	46	54
B. quite well	33	51		8	31	
C. adequately	45	18		27	13	
D. not too well	9	3		15	5	
E. not ready	-	-		35	5	
7. How confident do you feel regarding your ability to analyze the teaching-learing process?						
A. very confident	7	16	15	7	36	35
B. confident	62	68		44	50	
C. not too confident	28	16		24	14	
D. not developed this ability	3	-		25	-	
8. How confident do you feel regarding your ability to use independent study as a strategy in the teaching-learning process?						
A. very confident	8	24	31	5	40	59
B. confident	56	71		26	50	
C. not too confident	36	5		59	9	
D. do not have this ability	-	-		10	-	

TABLE VIII (continued)

PROFESSIONAL GROWTH OF TEACHERS

	Teacher's Opinion			Team Leader's Opinion		
	2nd week	5th week	Gain	2nd week	5th week	Gain
9. How well do you understand the use of performance criteria in developing goals?						
A. good understanding and can develop for future teaching	18	39	30	8	56	54
B. good understanding	36	45		29	35	
C. fair understanding	45	16		38	6	
D. not developed this ability	1	--		25	3	
10. How confident do you feel regarding your ability to use flexible scheduling and grouping as an effective strategy to promote learning?						
A. very confident and can use them to good effect	16	52	[illegible]	1.5	37	52
B. very confident	20	14		1.5	18	
C. confident	35	30		33	28	
D. not too confident	30	4		46	17	
E. do not have this ability	-	-		18	-	

Gain was determined by difference between 2nd and 5th week in percentages of teachers who checked either the A or B responses, indicating positive feelings.

Example: Item 9 - (39 + 45) = (18 + 36) = 30

TABLE VIII WOULD INDICATE:

1. There was a clearer understanding of the process goals at the end of the fifth week by both students and Team Leaders and Observation Team Leaders.

2. A significant percentage increase in the ability to teach for the process goals was indicated by students, Team Leaders and Observation Team Leaders.

3. A significant percentage of growth in the ability to evaluate pupil growth in relation to the process goals was shown. However, Team Leaders and Observation Team Leaders felt the percentage of growth was larger than did the students.

4. A smaller percentage of growth in developing strategies to teach different groups of pupils was noted.

5. A percentage of growth in understanding of advantages and disadvantages of team teaching was indicated. Again, the Team Leaders and Observation Team Leaders felt the student growth was greater than did the students themselves.

6. Regarding the analysis of the teaching-learning process, students were less confident than their leaders.

7. Significant growth was made by students to understand and use performance criteria in developing educational objectives.

8. Team Leaders and student (teachers) responses show perceptive differences.

Student (Teacher) and Pupil Attitudes
Grades Three Through Nine

In an effort to measure the degree of correlation between pupils and students (teachers) in grades three through nine, an opinionnaire was designed to measure attitudes regarding such areas as instructional procedures, scheduling of time and size of groups.

Pupils and students (teachers) were asked to respond to each item in the opinionnaire by checking one of the following: strongly agree, agree, disagree, or strongly disagree. Weighted scores were assigned to each response for each item. The response "strongly agree" was assigned a score of four, "agree" a score of three, "disagree" as a score of two, and "strongly disagree" a score of one. The total score for each of the twenty items was arrived at by multiplying the responses for each item by the weighted score for each. The weighted score for each item was divided by the total number of responses to produce the mean score.

Items for the student (teacher) opinionnaire were listed in rank order. The actual opinionnaires of both students (teachers) and pupils are found in Appendices J and K respectively. Comparative results for the Elementary Student (teacher) Opinionnaire and the Elementary Pupil Attitude Opinionnaire are listed in Table IX. Comparative results for the Junior High are listed in Table X.

TABLE IX

ELEMENTARY STUDENT (Teacher) AND PUPIL ATTITUDES

	Students' (Teachers) Opinion		Pupils' Opinion	
Items are listed in rank order according to student's (teacher) opinion.	CWS	Mean	CWS	Mean
1. Team teaching is an excellent way to help students learn.	153	3.40	838	3.26
2. I believe students are looking forward to the rest of Summer School.	150	3.26	827	3.21
3. Teachers are as interested in how students learn as in what students learn.	145	3.15	850	3.35
4. Summer School with its varied activities has been interesting for pupils.	143	3.25	889	3.59

TABLE IX (continued)

ELEMENTARY STUDENT (Teacher) AND PUPIL ATTITUDES

		Students' (Teachers) Opinion		Pupil's Opinion	
		CWS	Mean	CWS	Mean
5.	The distribution of pupil time per subject area was accomplished by teachers in an efficient and effective manner.	137	3.11	819	3.15
6.	Changing teachers makes little difference in pupil learning.	137	3.04	746	2.93
7.	Different instrumental procedures were used for different size groups.	137	3.04	698	2.76
8.	Students have more time for reflective thinking in the Summer School program.	136	2.96	783	3.04
9.	Things students are studying are simple enough to understand.	135	3.07	847	3.21
10.	Evaluation procedures for student work is well accepted by the students.	134	2.98	829	3.16
11.	Directions and assignments given by teachers are made clear so that students know what they should be studying.	133	2.96	821	3.19
12.	Proper lengths of time were alloted for pupil study.	132	3.00	787	3.07
13.	Pupils were given instruction in the subjects which should be studied.	128	2.84	828	3.21
14.	Subjects studied this summer will help students next year.	125	2.98	852	3.39
15.	Plenty of materials, books, and textbooks are present.	122	2.65	770	3.04
16.	Students have time to finish the activities they start.	121	2.63	804	3.15
17.	Students do not understand why they are doing many things this summer.	102	2.27	582	2.22
18.	Pupils had difficulty in determining where to go and what to do each day.	100	2.22	644	2.41
19.	The total number of pupils in a group makes little or no difference to the individual pupil within the group.	99	2.20	795	3.06
20.	The amount of time devoted to teacher lecture is about the same as during the regular year.	91	1.98	641	2.61

TABLE X
JUNIOR HIGH STUDENT (Teacher) AND PUPIL ATTITUDES

		Students' (Teachers) Opinion		Pupils' Opinion	
		CWS	Mean	CWS	Mean
1.	Teachers are as interested in how students learn as in what students learn.	96	3.69	382	3.24
2.	Team-teaching is an excellent way to help student learn.	94	3.61	417	3.45
3.	Students have more time for reflective thinking in the summer school program.	89	3.42	363	3.03
4.	Different instructional procedures were used for different size groups.	88	3.38	353	2.97
5.	Summer school with its varied activities has been interesting for pupils.	87	3.34	390	3.17
6.	Things students are studying are simple enough for them to understand.	86	3.30	369	3.03
7.	Pupils were given instruction in the subjects which should be studied.	84	3.23	354	2.97
8.	Plenty of materials, books, and textbooks are present.	83	3.19	383	3.19
9.	The distribution of pupil time per subject area was accomplished by teachers in an efficient and effective manner.	81	3.24	399	3.24
10.	Changing teachers makes little difference in pupil learning.	81	3.11	333	2.75
11.	Proper lengths of time were alloted for pupil study.	81	3.11	332	2.72
12.	Subjects studied this summer will help students next year.	81	3.11	390	3.20
13.	I believe students are looking forward to the rest of summer school.	79	3.03	347	2.80
14.	Students have time to finish the activities they start.	78	3.00	360	2.98
15.	Evaluation procedures for student work is well accepted by the students.	76	2.92	351	2.90
16.	Directions and assignments given by teachers are made clear so that students know what they should be studying.	75	2.88	381	3.18

TABLE X (continued)

JUNIOR HIGH STUDENT (Teacher) AND PUPIL ATTITUDES

	Students' (Teachers) Opinion		Pupils' Opinion	
	CWS	Mean	CWS	Mean
17. Pupils have difficulty in determining where to go and what to do each day.	61	2.34	250	2.08
18. Students do not understand why they are doing many things this summer.	57	2.28	250	2.03
19. The amount of time devoted to teacher lecture is about the same as during the regular year.	56	2.15	287	2.37
20. The total number of pupils in a group makes little or no difference to the individual pupil within the group.	44	1.69	312	2.00

Parent Attitudes

An opinionnaire was given to the parents who attended parent-teacher conferences held at the end of the third week of the elementary summer program. The parents were asked to respond anonymously to the opinionnaire. The purpose of the opinionnaire was to sample parents' feeling about the extended summer program.

Eighty-two per cent of the parents responded to the opinionnaire. A sample of the Parent Attitude Opinionnaire is in Appendix L. The results of the opinionnaire are summarized in percentage form in Table XI.

TABLE XI

PARENT ATTITUDES

	Yes	No	Undecided	No Answer	Total %
1. Do you feel that your child's time and money was well invested?	87.5	1.8	9.8	0.7	99.8
2. Did you get adequate advance information about the program?	68.2	25.1	5.4	1.0	99.7
3. Has your child freely discussed the program with family members?	68.6	19.7	7.2	4.3	99.8
4. Have you noticed any change in attitude about school in general?	58.0	28.8	12.4	0.7	99.9
5. Does enrichment seem more appropriate than remedial summer work?	73.7	6.2	17.1	2.9	99.9
6. Were your child's expectations from the program sufficiently met?	69.3	3.6	22.9	4.0	99.8

Recommendations

It was recommended that the extended summer program be continued and improved to provide teachers with effective training for the improvement of instruction.

1. The Planning Teaching Observation cycle should be continued and studied for possible alterations to improve its effectiveness.
2. There should be an effort made to better integrate art, music, and physical education. Perhaps this could be achieved by placing 15 members on a team and having the team handle all instruction.
3. Persons assigned to leadership positions (program coordination, principal, team leaders, observation team leaders) should have previous experience in the extended program.
4. The team teaching assistant should be a certificated teacher.
5. Inservice training should be given to the program participants prior to the beginning of the summer session to enchance their understanding of process goals and process curriculum.
6. Curriculum should be determined prior to the formations of teams, beginning no later than January. Team planning should then revolve around process structures, rather than content structures.
7. All teams (elementary and secondary) should be housed on one campus.
8. Dr. Allen should give lectures during the first three days of orientation week. He should then return for two days during the fourth week.
9. A larger variety of speakers should be acquired to participate in the summer program, incorporating R-1 personnel with planning and observation teams.
10. A follow-up study should be made of the 1966 participants during the 1966-67 school year.
11. Diagnostic testing should be completed in the home school prior to the summer session.

12. An ongoing study should be devised and evaluation instruments refined to determine program effectiveness.

13. Video-tape equipment should be provided at each center.

14. A communication-type (newsletter) paper should be sent to parents periodically during the summer.

15. A presentation should be delivered to parents through P.T.A. groups explaining the summer program. An emphasis should be placed on the processes taught in summer school and their importance in a child's education.

16. Advisee groups should be continued as a part of the effort to better communications among the students (teachers) and pupils.

17. More emphasis should be placed on techniques developed to evaluate pupil progress.

APPENDICES

APPENDIX A

PRIMARY TEAM
LESSON PLAN

TEAM B Bear Creek Elementary	DATE: July 26, 1966
Primary Unit	TIME: 9:00 a.m. -9:30 a.m.
TEACHER Room 4	SUBJECT: Math

* **OBJECTIVES**

Common:

1. Using Cuisenaire rods, the learner will be able to build at least two addition patterns, each having two addends, for sums up to and including 10. Demonstrating that he is able to construct patterns for any two of these sums will be considered acceptable performance.
2. Using the addition patterns constructed with the Cuisenaire rods for sums up to and including 10, the learner will demonstrate that changing the order of the addends will not change the sum.
3. Using Cuisenaire rods, the learner will be able to supply the missing addend in a number sentence. Number sentences having sums up to and including 10 will be used. Two addends will be considered in a number sentence.

Alternative:

1. Using Cuisenaire rods, the learner will construct addition patterns to show sums greater than 10. His patterns may contain more than 2 addends.
2. Using Cuisenaire rods, the learner will supply the missing addend in a number sentence involving sums greater than 10.

STRATEGY

1. Group and teacher participation in the contruction of addition patterns for a sum less than 10. Patterns are to include only 1 or 2 addends.
2. Group and teacher discussion of the pattern construction including its use to determine missing addends.
3. Individual construction of patterns for sums up to and including 10.
4. Teacher-pupil discussion with those proceeding to alternative objectives

EVALUATION

Common:

1. Has the learner constructed at least 2 addition patterns,

APPENDIX A (continued)

each having two addends, for at least two sums (sums not to exceed 10)?

2. Did the learner demonstrate that changing the order of the addends will not change the sum?

3. Was the learner able to supply the missing addend in a number sentence having sums not to exceed 10? The number sentence considers only two addends.

Alternative:

1. Did the learner construct addition patterns with the rods to show sums greater than 10? Did his pattern contain more than two addends?

2. Was the learner able to supply the missing addend in a number sentence having sums greater than 10?

---

*In this summer session, Dr. Allen defined learner-designed objectives as being: Common - those goals to be met by all; alternative - those goals to be satisfied by some.

The above lesson plan represents the statement of objectives in these terms. Process and content goals are identifiable as measureable performance criteria within each specific objectives.

APPENDIX B

INTERMEDIATE TEAM

LESSON PLAN

Approx.
Time

Date: Tuesday, July 5

Math
8:30-
9:30 a.m.

I. Objectives
  A. Content Goals
    1. Become aware of binary system of numeration.
    2. Become acquainted with the requirements of the contract.
  B. Process Goal - To use mathematical skills to perform operations in base 2.

II. Procedure
  A. Group presentation of background information.
  B. Small group presentation of the contract.
  C. Present the counting process in base 2 through use of number lines, charts and other materials.
  D. Open Lab in all 3 areas - 9:00 - 9:30 approximately.

III. Evaluation - Teacher observation

Science
10:40-
11:40

I. Objectives
  A. Content Goal - Test property of powders by using heat, vinegar, and iodine to realize what happens to the powders as a result of these tests.
  B. Process Goal - Inquiry

II. Procedure
  A. Meet as a large group and present the contract plan (first 15 min. of the period on Tuesday).
  B. Meet in small groups - Open Lab.
    1. Establish the 3 testing areas and the 2 additional interest areas by location and equipment to be used.
    2. Introduce the powders.
    3. Introduce the methods of testing.
    4. Individual or group work with a minimum of 3 tests required.
    5. If the minimum of tests are accomplished, the students are free to:
      a. Experiment with testing powders not included in the unit.
      b. Work with various science kits.
      c. Work on a project of their own choice.

III. Evaluation
  A. Teacher observed participation during Open Lab.
  B. Fulfillment of the contract which includes records of their experiments.

APPENDIX B (continued)

Approx.
Time — Date: Tuesday, July 5

Lang.
Arts
10:40-
11:40

I. Objectives
   A. Content Goal - the students will experience a variety of activities based on language skills, and they will extend their learning experience from the previous week.
   B. Process Goal - The students will adjust the situation to best accomplish what they will be doing.

II. Procedure - Interest Center Activities in Open Lab.
   A. Read a book for your own enjoyment.
   B. Write a commercial selling a book or story.
   C. Use of the listening lab.
      1. Listen to the beginning of the story, then write your own ending.
      2. Listen to the poem "Jabberwocky" by Lewis Carroll. Can you write a poem like this one?
   D. Read some stories from "Reader's Digest" and do the skill work.
   E. Visit the Team E Cinema - showing of filmstrip.

APPENDIX C

SOCIAL STUDIES LESSON PLAN

JUNIOR HIGH - TEAM A

Tuesday, July 20

INTENT: To continue gathering data for episode.

OBJECTIVES:

Content	Process
1. To select materials suitable for the episodes chosen.	1. To pursue inquiry through selection and use of resources.
2. To start organizing this material.	2. To formulate a purpose and an evaluation of each day's progress.

STRATEGY:

1. Before dividing into groups ask -- What is your purpose today? What is your first step toward accomplishing this purpose? How can you get it moving? What means can you use to evaluate your progress at the close of class? (This is also for those in independent study.)
2. Divide into interest groups. Library, resource center, and 207
3. Jackson and Ireland - consultants, voluntary helpers, coordinators, when necessary.
4. Show second film as resource--optional.
5. At 11:30 all groups return to 207. Each group evaluate session and turn in written statement of evaluation and progress. This is to include at what point in the episode you are at the close of school day. (This will be returned the following day so a continual progress-self-evaluation will become a pattern of group behavior.)

EVALUATION:

1. Observation of pupil interaction and development of behavioral patterns in interaction. Particular stress, today, on initiating group activity and evaluating progress.
2. Progress in gathering data
3. Written statement requested for continual progress report.

APPENDIX D

*JEFFERSON COUNTY SUMMER PROGRAM GOALS

CONTENT GOALS

In any area of knowledge, the major content goals have to do with learning: (1) terminology, (2) classification, (3) information, (4) explanatory theory, and (5) technological applications of information and theory.

PROCESS GOALS

The acquisition of knowledge is not sufficient. Students must know how to acquire, interpret, evaluate and communicate that knowledge. These goals are: (1) tool skills, (2) critical thinking, (3) creative thinking, (4) inquiry, (5) self-instruction, (6) self-evaluation, (7) interests, and (8) study habits.

PERSONAL-SOCIAL GOALS

The personal-social goals include: (1) values - social, esthetic and theoretical, (2) personality make-up, emotional security, positive self-concept and self-assertion, and (3) social behavior patterns - self-control and cooperation and tolerance.

*This list is not inclusive.

APPENDIX E

Log of Pupil Learning Activities (Elementary)

R-1 Research

Date: July 15

Pupil Level: Primary
Open Laboratory

Teacher:

Content goal and/or process goal	Activity-type	Time Spent	Subject Area	No. of pupils	Evaluation Scheme	Additional Clarifying Comments
The learner will develop growth in self-pacing, self-selective, self-direction, responsibility, independence, and confidence.	discussion	8:15 - 8:30	(12) advisee groups	8	Discussion	
	Open Lab.	8:30 - 9:00	math	25	General, individual observation and record folders.	Materials used in Math Lab. 1.Design books 2.Abacas 3.Geo-boards 4.Attribute blocks 5.Flash cards 6.Games 7.Over-head projector 8.Flannel-board 9.Modern Math Aids 10.Modern Math work-sheets
	Open Lab	9:00 - 10:00	math	20		
Having a variety of teacher design activities, the learner will record his own program by lising those activities which he has completed in his individual record folder.	Japanese speaker	10:00-10:45	Social Studies	38	Discussion & Observation and individual record folders	
	Special Subjects	10:45-11:45	3 groups	27	Special Subjects - Art, music gym.	

APPENDIX EE

Log of Pupil Learning Activities (Elementary)

R-1 Research

Date: July 13, 1966

Pupil Level: Intermediate

Teacher:

Content goal and/or process goal	Activity-type	Time Spent	Subject Area	No. of Pupils	Evaluation Scheme	Additional Clarifying Comments
		8:15 - 9:30	SPECIAL SUBJECTS -	42	Music, Art, P.E.	
Reading for information, organizing material, giving talk.	Informational rdg. speech giving.	9:30- 10:30	Rdg.	22	Listening to talks, observation	
Improve skills in multiplication	Open Lab. Multiplication	10:40- 11:10	Math	1	Work sheets - observation	
To learn how animals move	Film-discussion worksheet	11:10 - 11:45	Science	120	written questions - observation	

APPENDIX F

TEACHER'S OPINIONNAIRE

Observable changes in teacher behavior during 1965-1966 school year.

As a result of your involvement in the 1965 Summer Program what [illegible] participation did you show during the 1965-1966 school year in the following areas:

1. Flexible scheduling
   a. very much ____b. some_____ c. very little____ d. none____
2. Micro teaching and use of the video tape
   a. very much____ b. some_____ c. very little____ d. none____
3. Grade level or cooperative planning
   a. very much____ b. some_____ c. very little____ d. none____
4. Teacher colleague observation
   a. very much____ b. some_____ c. very little____ d. none____
5. More precise objectives stated in lesson plans.
   a. very much____ b. some_____ c. very little____ d. none____
6. More effective utilization of varied instructional materials
   a. very much____ b. some_____ c. very little____ d. none____
7. Willingness to try new techniques
   a. very much____ b. some_____ c. very little____ d. none____
8. A change in attitude toward personal professional improvement
   a. very much____ b. some_____ c. very little____ d. none____
9. Encourage other teachers to enter the 1966 Devinny Summer Program
   a. very much____ b. some_____ c. very little____ d. none____
10. Try to initiate new ideas in the building
    a. very much____ b. some_____ c. very little____ d. none____
11. Did you meet with opposition from other staff members
    a. very much____ b. some_____ c. very little____ d. none____
12. Did you meet any opposition from your principal
    a. very much____ b. some_____ c. very little____ d. none____
13. Did you individualize your instruction
    a. very much____ b. some_____ c. very little____ d. none____

APPENDIX G

JEFFERSON COUNTY PUBLIC SCHOOLS

CHANGES IN TEACHER BEHAVIOR

PRINCIPAL'S OPINIONNAIRE

As a result of your teachers involvement in the 1965 Jefferson County R-1 Extended Summer Program what degree of participation did he show during the 1965-1966 school year in the following areas:

1. Flexible scheduling
   a. very much____ b. some_____ c. very little____ d. none____
2. Micro teaching
   a. very much____ b. some_____ c. very little____ d. none____
3. Grade level or cooperative planning
   a. very much____ b. some_____ c. very little____ d. none____
4. Teacher colleague observation
   a. very much____ b. some_____ c. very little____ d. none____
5. More precise objectives stated in lesson plans
   a. very much____ b. some_____ c. very little____ d. none____
6. More effective utilization of varied instructional materials
   a. very much____ b. some_____ c. very little____ d. none____
7. Willingness to try new techniques
   a. very much____ b. some_____ c. very little____ d. none____
8. A change in attitude toward personal professional improvement
   a. very much____ b. some_____ c. very little____ d. none____
9. Try to initiate new ideas in the building
   a. very much____ b. some_____ c. very little____ d. none____
10. Did you meet with opposition from other staff members (if you got an answer to No. 9)
    a. very much____ b. some_____ c. very little____ d. none____
11. Did you individualize your instruction
    a. very much____ b. some_____ c. very little____ d. none____
12. Do you recommend that the 1965 & 1966 summer program continue with added improvement? yes____ no____

APPENDIX H

PROFESSIONAL GROWTH OF TEACHERS

Student Goals Opinionnaire

1. At this point, how well do you understand the objectives (process goals) of education?

    _____have a good understanding and feel I can teach from them

    _____have a good understanding

    _____have a fair understanding

    _____have not developed an understanding yet

2. At this point, how well do you understand how to teach for the objectives (process goals) of education?

    _____have a good understanding and feel I can teach for them

    _____have a good understanding

    _____have a fair understanding

    _____have not developed an understanding as yet

3. At this point, how well do you understand how to evaluate pupil growth in relation to the objectives (process goals) of education?

    _____have a good understanding and feel I can teach for them

    _____have a good understanding

    _____have a fair understanding

    _____have not developed an understanding yet

4. At this point, how confident do you feel in being able to develop strategies for teaching different groups?

    _____very confident

    _____confident

    _____not too confident

    _____do not have this ability yet

5. At this point how well do you understand the advantages and disadvantages of team teaching?

    _____have a good understanding and feel I can explain them to others

    _____have a good understanding

    _____have a fair understanding

    _____have not developed an understanding yet.

APPENDIX B (Continued)

6. At this point, how well do you think you could operate (teach or supervise) in an on-going team teaching operation?

_____very well

_____quite well

_____adequately

_____not too well

_____not ready at this point

Previously I have had team teaching experience during the regular school year. _____yes _____no

7. At this point, how confident do you feel regarding your ability to analyze the teaching-learning process?

_____very confident

_____confident

_____not too confident

_____do not have this ability yet

8. At this point, how confident do you feel regarding your ability to use independent study as a productive strategy in the teaching-learning process?

_____very confident

_____confident

_____not too confident

_____do not have this ability yet

9. At this point, how well do you understand the use of performance criteria in developing educational objectives?

_____have a good understanding and feel I can develop for my future teaching

_____have a good understansing

_____have a fair understanding

_____have not developed this understanding yet

10. At this point, how confident do you feel regarding your ability to use flexible scheduling and grouping as an effective strategy to promote learning?

_____very confident and feel I could use them to good effect

_____very confident

_____confident

_____not too confident

_____do not have this ability as yet

APPENDIX I

JEFFERSON COUNTY PUBLIC SCHOOLS

PROFESSIONAL GROWTH OF TEACHERS

Team Leader and Obs. Team Leader Opinionnaire

1. At this point, how well does your team member understand the objectives (process goals) of education?

_____has a good understanding and feel he can teach from them
_____has a good understanding
_____has a fair understanding
_____has not developed an understanding yet

2. At this point, how well does your team member understand how to teach for the objectives (process goals) of education?

_____has a good understanding and feel he can teach from them
_____has a good understanding
_____has a fair understanding
_____has not developed an understanding yet

3. At this point, how well does your team member understand how to evaluate pupil growth in relation to the objectives (process goals) of education?

_____has a good understanding and feel he can teach from them
_____has a good understanding
_____has a fair understanding
_____has not developed an understanding yet

4. At this point, how confident does your team member feel in being able to develop strategies for teaching different groups?

_____very confident
_____confident
_____not too confident
_____doesn't have this ability yet

5. At this point how well does your team member understand the advantages and disadvantages of team teaching?

_____has a good understanding and feel he can explain them to others
_____has a good understanding
_____has a fair understanding
_____has not developed an understanding yet

6. At this point, how well does your team member think he could operate (teach or supervise) in an on-going team teaching operation?

_____Very well
_____quite well
_____adequately
_____not too well
_____not ready at this point

APPENDIX I (continued)

7. At this point, how confident does your team member feel regarding his ability to analyze the teaching-learning process?

   _____very confident
   _____confident
   _____not too confident
   _____does not have this ability yet

8. At this point, how confident does your team member feel regarding his ability to use independent study as a productive strategy in the teaching-learning process?

   _____very confident
   _____confident
   _____not too confident
   _____does not have this ability yet

9. At this point, how well does your team member understand the use of performance criteria in developing educational objectives?

   _____has a good understanding and feel he could develop for his future teaching
   _____has a good understanding
   _____has a fair understanding
   _____has not developed this understanding yet

10. At this point, how confident does your team member feel regarding his ability to use flexible scheduling and grouping as an effective strategy to promote learning?

   _____very confident and feel he could use them to good effect
   _____very confident
   _____confident
   _____not too confident
   _____does not have this ability as yet

APPENDIX J

TEACHER ATTITUDE OPINIONNAIRE

1. The distribution of pupil time per subject area was accomplished by teachers in an efficient and effective manner.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

2. Changing teachers makes little difference in pupil learning.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

3. The total number of pupils in a group makes little or no difference to the individual pupil within the group.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

4. Summer school with its varied activities has been an interesting experience for pupils.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

5. Pupils had difficulty in determining where to go and what to do each day.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

6. Pupils were given instruction in the subjects which should be studied.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

7. Proper lengths of time were allotted for pupil study.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

8. I believe students are looking forward to the rest of the summer school.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

9. Team teaching is an excellent way to help students learn.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

10. The amount of time devoted to teacher lecture is about the same as during the regular year.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

11. Subjects studied this summer will help students next year.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

12. Students do not understand why they are doing many things this summer.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

13. Plenty of materials, books, and textbooks are present.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

14. Things students are studying are simple enough to understand.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

APPENDIX J (Continued)

15. Directions and assignments given by teachers are made clear so that students know what they should be studying.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

16. Evaluation procedures for student work is well accepted by the students.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

17. Different instructional procedures were used for different size group.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

18. Teachers are as interested in how students learn as in what students learn.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

19. Students have more time for reflective thinking in the summer school program.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

20. Students have time to finish the activities they start.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

21. School ______________________ Team ________________________

APPENDIX K

PUPIL ATTITUDE QUESTIONNAIRE

1. I like the way teachers have set up my time in school this summer.
   Strongly agree___ Agree___ Disagree___ Strongly disagree___
2. Changing teachers makes little difference in my learning.
   Strongly agree___ Agree___ Disagree___ Strongly disagree___
3. The number of other pupils makes little or no difference.
   Strongly agree___ Agree___ Disagree___ Strongly disagree___
4. Summer school has been interesting because we do many things.
   Strongly agree___ Agree___ Disagree___ Strongly disagree___
5. It is hard to tell where to go or what to do each day.
   Strongly agree___ Agree___ Disagree___ Strongly disagree___
6. Subjects we are studying are ones which should be studied.
   Strongly agree___ Agree___ Disagree___ Strongly disagree___
7. Teachers have us study just about the right length of time.
   Strongly agree___ Agree___ Disagree___ Strongly disagree___
8. I am looking forward to the rest of summer school.
   Strongly agree___ Agree___ Disagree___ Strongly disagree___
9. Team teaching is an excellent way to help me learn.
   Strongly agree___ Agree___ Disagree___ Strongly disagree___
10. Teachers lecture about as much as during regular school.
    Strongly agree___ Agree___ Disagree___ Strongly disagree___
11. These studies will help me next year.
    Strongly agree___ Agree___ Disagree___ Strongly disagree___
12. I don't understand why we are doing many things this summer.
    Strongly agree___ Agree___ Disagree___ Strongly disagree___
13. Plenty of materials, books and textbooks are present.
    Strongly agree___ Agree___ Disagree___ Strongly disagree___
14. Things we are studying are simple enough to understand.
    Strongly agree___ Agree___ Disagree___ Strongly disagree___
15. Teachers have made it clear what we should be studying.
    Strongly agree___ Agree___ Disagree___ Strongly disagree___
16. I like the new way teachers use to judge what I do.
    Strongly agree___ Agree___ Disagree___ Strongly disagree___

APPENDIX K (continued)

17. Different methods of teaching are used in different sized groups.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

18. Teachers are as interested in how we learn as in what we learn.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

19. I have more time to think in summer school.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

20. We usually finish the things we start.

Strongly agree___ Agree___ Disagree___ Strongly disagree___

APPENDIX I

1968
Jefferson County
Extended Summer Program

Parent Opinions [illegible]

1. Do you feel that your child's time and money was well invested?

a. Yes___ b. No____ c. Undecided____

2. Did you get adequate advance information about the program?

a. Yes___ b. No____ c. Undecided____

3. Has your child freely discussed the program with family members?

a. Yes___ b. No____ c. Undecided____

4. Have you noticed any change in attitude about school in general?

a. Yes___ b. No____ c. Undecided___

5. Does enrichment seem more appropriate than remedial summer work?

a. Yes___ b. No____ c. Undecided___

6. Were your child's expectations from the program sufficiently met?

a. Yes___ b. No____ c. Undecided___

7. Parent Comments:

APPENDIX M

TO: Jay Caton August, 1966
FROM: Coordinators and Principals
TOPIC: Recommendations for Extended Summer School

Request for subjective reaction of participants to the Extended Summer School Program became the focus of attention of a meeting held July 19, 1966. This meeting involving Coordinators and Principals identified a number of commonly held views and concerns. It was believed these matters might be reflected in a common statement to which the discussion participants might generally subscribe. It was believed that personal reactions then might be directed at specific features of individual programs.

It was the consensus that the program was very effective as constituted; however, greater effectiveness and a great deal more efficiency might result if certain changes would be instituted:

Administration: The following recommendations are made:

1. The number of staff personnel remain essentially as currently provided.
2. Leadership roles be reviewed to more clearly define specific responsibilities and functions.
3. Leadership in the program be identified at least 8 months prior to the opening of the program.
4. Specific pre-program responsibilities be assigned staff members so that the tasks could be discharged early in the year.
5. Auxiliary personnel (subject matter specialists, etc.) be assigned a subordinate position to the coordinators of the program so their services could be integrated into the program more effectively.

MATERIALS ACQUISTION: It is recommended that:

1. Procedures be streamlined for the acquisition of materials and equipment. The short duration of the program will not permit long delays induced by vacation schedules of supply.

2. Current staff members be requested to identify all the instructional equipment and instructional materials that experience would suggest as necessary for handling a single team's instructional program. This basic list could be multiplied by the number of teams involved in each of the programs.
3. The basic needs be assembled by the director, or coordinators, prior to the beginning of the program. These needs should be acquired from the budget before it is divided into separate accounts for building principals.
4. Those needs peculiar to the program in each building would be requisitioned by building principals.
5. Large pieces of instructional equipment (i.e. one-of-a-kind items like videotape machines, etc.) should be scheduled by the coordinators prior to the beginning of the program and the published schedule should provide teams the opportunity for the effective use of such equipment.

CURRICULUM PLANNING: It is recommended that:

1. Curriculum should be determined and materials to implement the curriculum should be acquired under the direction of the subject matter specialists at least 6 weeks prior to the beginning of the program.
2. The curriculum be planned as a "process" rather than a "content" curriculum.
3. An extended summer school curriculum be devised that will have sequential consistency so that children might be encouraged to participate successive summers without repeating content.

PROGRAM DEFINITION: Since the current program is a combination of a number of adaptions from a variety of sources, it is recommended that:

1. The summer program book be completely revised to reflect the unique purposes of the district.
2. The structural model be altered to fit the purposes of the district.
3. Inconsistencies (i.e. the emphasis placed on analysis by the district, and on evaluation by the consultants and affiliated college personnel) be eliminated.

4. The instructional department determine the district's commitment to the Program and if warranted, establish a close supportive role for Level Directors in their relationship to it.
5. The District review its relationship with associated institutions to insure that the Program's support by such institutions does not become restrictive of the District's efforts.

STUDENT (TEACHER) INVOLVEMENT: It is recommended that:

1. Participants be identified as early in the 2nd Semester as possible.
2. Options other than the college credit be structured as inducements for participation (i.e. academic bonus credit toward higher salaries, or, perhaps, a small immediate stipend).
3. Application forms for participation be inclusive of the contract terms related to performances expected by the county and by the sponsoring college.
4. Signatures on application forms be considered a contract of performance, both as to the nature of experience and the length of time involvement.
5. Consideration be given to a more comprehensive program of in-service to precede actual program involvement so that more time may be devoted to "practicing skills" when once the program begins.

TEACHER EVALUATION: It is recommended that:

1. Evaluation, if one interprets the term to refer to merit rather than to analysis, should be deemphasized. The program's objective related to experimentation is somewhat restricted by the feeling that one had best do only the "tried and true".
2. Evaluation for academic credit should be governed by clearly established contractual obligations that are made a part of the application form.
3. Performance Criteria for evaluation should be the joint product of the district and the affiliated college.

4. Performance Criteria should be drawn in such a manner as to permit innovative applications of practices and techniques, but should not consist of options in the categories of experiences to be encountered.

TRANSPORTATION: It is recommended that:

1. The programs be centered in schools located in more populous areas.
2. The secondary program might be located at a single site and still maintain separate staffing and program characteristics for each program.
3. Buses should be left at the school site during the short interval between delivery and departure of students--drivers might be transported without the nessity for mileage on each vehicle.

BUILDING USAGE: It is recommended that:

1. Some administrative person in the program should be associated with the regular program in the building being used as a center. This will permit greater latitude in the use of the building and its equipment.
2. Where the building is being administered by personnel other than those normally operating the school, clear guidelines should be written that will identify acceptable practices and procedures related to the operation.
3. Custodial personnel should be scheduled into the building on some staggered work schedule to insure that the building availability is insured during those hours in which it is needed by the students (teachers).

LAY ASSISTANCE: It is recommended that:

1. A secretary be assigned to each Principal, as well as a team assistant for each team leader and his team.
2. The building secretary should be trained in usual district accounting procedures.
3. The team assistant be chosen for technical skills related to providing services associated with development of materials and discharge of clerical tasks.

Signed: Jerry Watson Bill Mitchell
Charles Teel Doris Richers
Stuart Frew Carl Zerger

APPENDIX N

STUDENT PROJECTS* - - EXTENDED PROGRAM
Bear Creek High School
1966

Susan LeVine
Earell Kissinger

We are doing a debate projected to the year 1984. We have taken as our facts that:

1. The veto power in the U.N. was abolished in 1975.
2. The United States was removed in 1981 for its aggressiveness in Viet Nam.
3. "Red" China was admitted in 1982.
4. "Red" China was elected a temporary member of the Security Council.

Our debate takes place outside the U.N. as the United States is no longer a member. Our proposition is: Resolved, that the United States should be readmitted to the United Nations.

We will be using many arguments now used in the argument over admittance of China to the UN.

(The debate will consist of 2 ten minute constructive speeches and 2 five minute rebuttals)

Kaye Gaynor

My project is in the Theatre department of English. I will read plays and discuss them with the theatre director, Mrs. Holsing, deciding where the theatre is going in 1984. I will hand in a paper on this subject Friday of the sixth week of school.

I have been assigned the Hairy Ape and the Glass Menagerie as a basis in finding the alienation of man in contempory plays.

5th week: General discussion with Mrs. Holsing on theatre of the Absurd and 10 specific plays that have been assigned.

6th week: Drawing together of notes and discussion drawing together a rough draft by Tuesday, a final draft by Wednesday. The final paper on Friday will have for emphasis: Where is the theatre going in 1984 through the more narrow subject of mans alienation.

Kolleen Kelley Hydroponics

For this project, I am using a simple process which enables plants to grow without dirt. The apparatus consists of a wooden structure which holds buckets. The top bucket contains a water, nutrient mixture. The mixture drips through the buckets which we have punched pinholes in the bottom. As the seeds develop, the roots grow through the screen which is placed inside the bucket.

At the end of the school, all data and information gathered will be brought to a conclusion and the project summarized.

* Reprinted as submitted by pupils.

Ron Chaney

My summer project is on the subject of DNA, which is found in the chromosomes in the nucleus. DNA is short for deoxyribonucleic acid. This project will consist approximately of two planaria.

DNA is suspected of being a gene type substance. For example, if you teach a hampster a certain characteristic then give another hampster the DNA of the first hampster, then the second hampster will have the characteristic of the first hampster.

What I want to do is to perform the above on mice and write down my observations and conclusions.

The reason I pick this project is because I am interested in genetics and DNA is a subject I know very little about and which tempts me to explore it.

This subject has to do with 1984 in the respect of we might be able to preserve such brains as Einstein, and ideas from authorities. To do this all we need to do is when a person dies who we want to keep helping our world, we take his DNA and inject it into another person who is living. This will make the world of 1984 a successful world.

Scott Partridge

I plan to study the pollution problem by 1984.

To study this, I plan to take several different samples of water from different spots along Clear Creek, one above Golden, one just below Golden, and one several miles below that. I will then compare the three samples to see what affect a small city can have on the cleanliness of water.

Pollution has a definite bearing on what life will be like in 1984. If one small city has such a great pollution affect on streams and rivers then we could reroute the streams so they would bypass cities and then figure out something else to do with the wastes.

Mike Carry

During this summer I hope to accomplish a way of putting the direct sunlight into useful energy. I have started on making the photo-cell, which is my means of making electricity, and then will use it to power something permantly useful like a radio.

This project is related to 1984 in the way that this is the best way of getting energy to run our industries and cities in the future.

Linda Kratz

A study on personality--what it is, how it affects us, how it will change from now until 1984. A questionnaire for the rest of the students and teachers and see what types there are here.

Chris Reed

World Peace is represented by my "Swan". After the tragic war of World War 3. This took place in June of 1983, and was ended in world destruction by January 1st, 1984.

My project is on an oil painting of a modern design of a swan.

Bruce Russell

I. World Specialization
  A. written report
  B. overhead projection

II. Books Used
  A. Rand McNally World Atlas
  B. Information Please Almanac, 1964.

III. Other aides
  A. plastic sheets for use on overhead projector

IV. Something about the report
  A. world specialization--the effect of world specialization on the world of 1984 will be great. With each country producing what they can do best the world would be a better place in which to live.

Jean Muirhead

My project is to find out how society has and will be effected as women gain their rights. I'm going to write out a questionaire to give to the students and then to older people to see who is dominant in the family, the husband or wife. I might find some solutions to the chaos that might result as women gain more rights.

Rollie McClure

My project is to study magnetic and gravitational fields by studying several books on the subjects. Also, an experiment using the Cavendish apparatus which I will build. When school ends several pages concerning what I have learned that I didn't know and what procedures I took and problem I ran into.

Ann Miller

My project is on poetry. I am working in a group of four. We are making a survey of modern poetry in order to predict what poetry will be like in 1984.

We are preparing a questionaire to be given to various people. This questionaire is concerned with current trends in modern poetry, and what people think they will like in the future.

We are going to give this questionaire to our own neighbors to see what is liked by people of our own economic standing.

We are also going to check into what is being bought by the people at the bookstores, and what is being checked out at the local libraries.

The end result should be a prediction of poetry in 1984.

Jackie Roller

My project deals with writing a short story.

I will take a boy and a girl in their late teens living in 1984 and use them in the subject of love. In other words, the story will be about those two teens who think they are in love with each other because they have been computer-matched. Eventually they'll discover that it isn't love. I'll sort of deal with the philosophy that love cannot be forced, no matter what age of history it is.

I'm not sure how long the story will be but I think it'll be at least seven pages long.

Tom Vance

Speech Synthesis

"Speech Synthesis", or artificial speech is often called generating speech. Sound waves by machanical, electronical or other ways not involving the use of human vocal organs.

The future may use Speech Synthesis in telephone form, by having cards you type out, set in the phone and be transferred to the other person on the line.

Steve Wilcox

This project consists of a day by day assignment for programming the computer. The lesson consists of going through recommended parts of the computer manual and following through with the instructions. By doing this I will get a good idea for how computers work and how to work them. It will give me a basis for future computer courses and a new field to investigate. In investigating this I will work out programs of my own that could be used in our society today and in figuring the future. I will find ways of applying the computers to uses in the future.

Barb Combs

Genetics

I. Introduction
II. Brief History
    A. Review Mendel observations and experiments
    B. Chart results and explain in detail

III. Present Knowledge
    A. Apply Mendel to present research
    B. Detailed explanation of genetics and heredity

IV. Future Possibilities
    A. Organized review of interviews with doctors
    B. Report of gathered information from written research
V. Conclusion
    A. Formal Summary
    B. Personal conclusions and views

Bibliography

Steve Powell

Short Story--Science Fiction

Democracy wins out over Tyranny. 25 pages(avg)

Karenne Priest
Art: Abstract Painting
Soc. St. Survey and written report on Negro Relationships in America.

Dave Herbert

My project shall concern learning the abilities and usefulness of computers by working with them and then, based on this study, try to determine how computers will affect life in 1984 especially in the field of math. I also want to try to figure out what computers will be capable of doing in 1984.

Spencer Johnson

I. What Brought About the Change in Life
A. Atomic weapons were destroyed
1. their power was realized in the 70's.
2. after Cuba was bombed, the bomb was considered too dangerous
3. all nations agreed to disarm themselves of atomic weapons
B. A country's power was now by men, not weapons
1. dailey exercise and training became a part of life
2. citizens disregarded many machines, just to gain exercise
3. nobody was rated a brain or a brute, for now both were equally a part of life, and necessary for survival.

II. The Change
A. Now fighting between nations was not uncommon, although the U. N. did it's best to remove friction .
B. Foreign aid ceased, for now people looked out for only their country, although many people immigrated and emigrated.
1. if a foreigner was worthy, he could become an American
2. Russia had gathered many citizens from different countries through the years.
a. for money
b. for land now cultivated in the "frozen" north.
C. Gradually different ideas and groups were erased.
1. communism
2. John Birchism accepted
3. Klu Klux Klan
D. Now each country was controlled by simply nationalism
E. No conflict with Negros, for in the 70's they proved their worth in campaigns(work) and politics.

Donna Johnstone **Hydroponics**

This summer for my project, I am doing a hydroponics experiment.

In this experiment various plants are grown in buckets without the use of dirt. The buckets are hung directly under one another. In the top bucket a small amount of nutrient is mixed with water. This drips down throught the pinholes in the bottom of the bucket and drips through the buckets containing seeds. Finally it reaches the bottom bucket and is dumped back into the top bucket.

Donna Johnstone, Continued

This process should speed up and stimulate the growth of plants.

Lynne Larson

Hydroponics

Hydroponics is a method of growing plants, consisting of a simple stand with many buckets with pinholed bottoms standing vertically one on top of the other. The top bucket contains water + a nutrient and the water drips from bucket to bucket to the bottom one.

I will evaluate this method of growing plants, discuss the success, and attempt to find out if it can be very useful in the future.

Debbie Langer

Psychology

By using a candid camera sort of situation, I plan to experiment with various emotions of people. I will observe the reactions of students and teachers in various situations. This will be performed during school hours.

Tim Price

I plan to make a plastic motel of a molecule. In doing this I hope to show how an atom's structure causes chemical bond. In doing this I'm using the theory that an election is a cloud or clouds of one or two election around the proton. Also that they arrange themselves so that they are as close to the proton but at an equal distance. With this theory and other facts and properties needed and used in this theory, I will try to arrange each atom in the molecule and then arrange them together to make the molecule.

Georganne Jurata

Comparision of Negro Family and White Family

I am comparing the negro family to the white family as differences stand now and how they might change or be changed by 1984 - for example culture, background, and possibly the income of both families and the difference. My out line will be something like the following.

I. Standards of the White family
   a. morally
   b. financial

II. Standards of the Negro family
   a. morally
   b. financial

III. Culture
   a. white
   b. negro

IV. Conclusion
   a. possible solutions to solve these problems in 1984
   b. possible problems in 1984.

Jewel Fischer

I'm going to show that mathematics and music are very closely related and that mathematics will influence the music that will be heard in 1984. I'm studying frequencies and pitches of notes and forming chords that are determined mathematically. I'm going to compose some music, made up of the harmonic series I figured out with figures, that will project the sound of 1984. I'm going to mention all the mathematical aspects of music that I have discovered for myself and I hope to include some other "sounds of 1984" already being experimented with by famous composers.

Nicky Campbell

I. Subject Matter: Social Rehabilitation
  A. Discussion of social rehabilitation
    a. types of people
    b. institutions in the U.S.
    c. contributors to the field
  B. Introduction to Fort Logan
    a. requirements to get in'
    b. information about organizations
    c. techniques used...
    d. inner social structure
  C. The pro's and Con's of Social Rehabilitation
    a. can deep problems be alleviated and learned to live with in a short period of time?
    b. who determines whether the person would be better off with a great deal of private psyciatric care or in a group-social-structure care?
    c. how much good do social rehabilitation centers do?
  D. Conclusion

II. Form: Term Paper
  A. typed in college form with correct footnotes
  B. bibliography
  C. 15-20
  D. include pictures
  E. diagrams

Ava Tirgrath

My project is mainly going to deal in Art. I'm going to draw and describe what fashions, are going to look like by 1984. Also, I'm going to give reasons why people are wearing these fashions.

Cindy Daniels

For our project we intend to discuss books such as 1984, Brave New World and Atheme.

We're going to talk around the point that we won't let ourselves evolve into societies like them.

Reasons for these beliefs are that man can think and reason. And that he has culture, technology, communication and many things in his favor to keep us from a society like 1984.

Cheryl Athoff

The project in which I have been working in the past few weeks is an acrylic painting. It is done almost as an abstract. One side is a negro, the other side is a skeleton. I have tried to represent what I feel it might be like in 1984. Who will be superior in 1984? The painting is not finished yet. But as it is near completion I feel that I have accomplished what I set out to achieve in painting a picture like this.

Mark Yates

Objective: It is to show how war will become more advanced and how it will in danger all life. Also to show that war will end life on earth.

Method: It is to describe the Nuclear Bomb of today and how they will improve. I also will describe future weapons. I will tell how this will in danger all life on earth.

Evaluation: Educationally I think my paper will tell how man is destroying himself although at the same time the same force that supplies the bombs helps man.